Miscellaneous Notes and Collected Papers

Publication/Creation

1847-1911

Persistent URL

https://wellcomecollection.org/works/v6zv2zfg

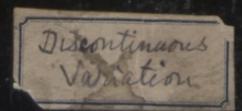
License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution, Non-commercial license.

Non-commercial use includes private study, academic research, teaching, and other activities that are not primarily intended for, or directed towards, commercial advantage or private monetary compensation. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.





1896-7

CAT	THATT		FOR	1001
I : A I	. H. IVIII	A PC	HILLING.	12241
OTT		TIL	T. OTA	1001.

U	ALENDAR	FOR 108	71.						
January.	Jebruary.	March.	April.						
SMBWTHFS	SMTWTHFS	SMBWBFS	SM TOW THE S						
1 2 3	1 2 3 4 5 6 7	1 2 8 4 5 6 7	1 2 3 4						
4 5 6 7 8 9 10 11 12 13 14 15 16 17	8 9 10 11 12 13 14 15 16 17 18 19 20 21	8 9 10 11 12 13 14 15 16 17 18 19 20 21	12 19 14 15 16 17 18						
18 19 20 21 22 23 24 25 26 27 28 29 30 31	22 23 24 25 26 27 28	22 23 24 25 26 27 28 29 80 81	Entry Intel Section (Section 1)						
May.	June.	Inly.	August. August. May Mark Mark Mark Mark Mark Mark Mark Mark						
SMThWTHFS	SMBWBFS	M Th W Th F S	MBWBFS						
3 4 5 6 7 8 9	1 2 3 4 5 6	5 6 7 8 9 10 11							
10 11 12 13 14 15 16	7 8 9 10 11 12 13 14 15 16 17 18 19 20	19 18 14 15 16 17 18	9 10 11 12 13 14 15						
17 18 19 20 21 22 28 24 25 26 27 28 29 30	21 22 28 24 25 26 27 28 29 30	19 30 21 22 23 24 25 26 27 28 29 30 31	CONTRACTOR OF THE PARTY OF THE						
31			80 81						
September.	October.	Nobember.	December.						
SMTW WFS	MEWBFS	SMTWTHFS	M T W T F S						
1 2 8 4 5	1 2 3	1 2 3 4 5 6 7	1 2 3 4 5						
6 7 8 9 10 11 12 18 14 15 16 17 18 19	4 5 6 7 8 9 10 11 12 13 14 15 16 17	8 9 10 11 12 13 14 15 16 17 18 19 20 21	6 7 8 9 10 11 12 13 14 15 16 17 18 19						
20 21 22 23 24 25 26 27 28 29 30	18 19 20 21 22 23 24 25 2 27 28 29 30 31	22 23 24 25 26 27 28 29 30	20 21 22 23 24 25 26 27 28 29 30 31						
CALENDAR FOR 1892.									

January.	gebruary.	March.	April.	
SMTWMFS	SM TOW THE S	SMTWTFS	SMTWTHFS	
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 28 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	1 2 8 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 80 31	3 4 5 6 7 8 9 10 11 12 18 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	
May.	June.	July.	Angust.	
SM TOW THE	SMTWTHFS	SMTWTHFS	M To W TH. F S	
1 2 8 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 23 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 2- 29 30	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 8 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 81	
September.	- Children		December.	
5 M b Wh F S 4 5 6 7 6 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	SM b W fk F S 2 8 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 28 24 25 26 27 28 29 80 31	S M B W B F S 1 2 8 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	S M Tb W Th F S 4 5 6 7 8 9 10 11 12 18 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	

Clear of new from cant Whit & brysper to totally herm Infratale is something larger than the lagget enceivable - by what is that I deferrent person Take character from good fothers Ideals my well be illutive the morgines are Saints VM, X, Unto Mand hund Howar Loyally ancual waldery relieves - bird ploves, as Discipline (shipowerla) glory and anulation love hate family

Frust wor Unnich of clas infichf.lv Small retail - Drange, Egg Classes in Syam? Passi ucruiti Sentences Tab fares - truces Bribery Estimate / value of property Dora 1 mediane Salaries

no of disaccord for various values of n n un possion where a = 0 7.69 4. 12 1.32 1.01 3 . 89 0,840.48 .53 2.710.520.32.16.37 1.77

Confirmed & Mixture by but reference to organic State by Populatites of John of Chimitals Geometre formed sample organist Wat . Sel: the tame percenting die in Such gent in a state for there who movice stand an Equal chance of contentral the treed. Shrab + tree Herror contingent of any arbitrary Clussiff of a continous Variable

anderson Buchanan 2 1th Collins 4 Galton Tracks Ferris Garsa Ercfiller Headley 2. Heary 2. Herrobel macnaghla Milman Col Randull Simpson Tooup Workbouse

Food 2.08
linggage \$1.56
Total to 3: 3/6.64

1/3 therefood 2.21
WM ML hupid 2.21
Hort pay 13
Mso 1 has R.R. Tidel 11.00

11.13

GALTON S PAPERS

Total results generaling 80 largor of which 3 had hured peril to bester with the seneralist with a male fetale milest emerged from 20 the 3 glove, 64 had perk liberoles

See Buskman But af. Report 1859 p. 22. 1857 p. 200; 1860 f. 34 also see Henfrey Bothe Gazotle II. 1851 / 2.3

F.A. Divey had washare College Oxford april9/95 Inlow: Soc: # Trans 1807 1/1 310-312 . Proc. 1887 H XVII XVIII Transmipson of hink tuberder in Son Carpini F. Merrifield 24 Verna Terrace Brighta april 7/95 Seleura Illustraria 4 of a dark brough estous that bred bree Nev 9. Heastoro Charminster Vicarage Forchester. Paronife. He French long ago racied varieties but Prof variety suction some seems of the wild harriest racted similar most. Rairries forwing seer of the wild redish raised there is growing them in a look of a heavy soil an old fact recorded by Pliny. I lettly corroborated of the carrot. These variaties become fixed & selection wave quite bereating & Parsnet Prof: Buckman neglecting all varieties but one fixed it in 1850 - wealled it the Student " It is thill the best in the triese Shives cente due t- down At - in wet climater the spines are lost Character have Every degree of persistence Quellem suggested " are the varieties or specific characters "extent are they hereortage or how do they alter?" The wild cobbase, and the wild sea Kale, have no variotion When under natural conditions. " may garden places there I do not understand the following - may garden places there innumerable variations as either two species of the same genus are not in caltivation as the Sweel plan, Cathage, Pansage Concraria; a like the species will not cross with others as the many races" which have been established to selection among southings of the Chinose primisore". restances george of effects of environment - all alfre plasts lead to be devart a questic to have finely droised a robbon-like submersed leaves the aid of Natural Selection " Reprinted from "Katural Sevence" bol v. Nº 32. Oct 1894. It is a roly to an article by A.R. Wallace . 5 safe XX 31. Sept 1894

t 8L Hayoruft Durwin te Swan Sonnewscherings p 40 among plants it really appears as if by adrasting the soil atter demale you may produce stanted varieties whose seed produce Amall plants - - a classical case mentioned by Lemaire D'orbigneys dichmary Lu that of the heigh when removed from Viedmont to trance, becomes a smaller variety only It its tormer height, in 2 n 3 generalisms Pointing, begging & retrievi, 1 togs. sheep tending geranums Two me Lellan Baron v Maltzan in the Peoples of South arabia read before the Berlin anthropolog Social on 1873 de /2 frefers to the existence among the Himyaretes of the families in which the porsession of six forgers in the the beable a sixted blue blood. The observation your description of translation but so have not space anthropiologia. I Oct 1873 (fort publication of the Louis a Continued Social founded Jan 73) Nev- F Bennott wardinghow Sarry MISO

£81 - Hayer lef. 10 28 defe 11 14 an 1121 Soft Cray 11.57 21 34 4 4 4 G 5 4'5

Schwendener - Mechanisch Theorie der Blattstellingen Leifung, Engelman 1878 NJC, Muller, Bolin: Untertaching VI. Herdeborg Sort hidines of Chrys Lewcanthuming Memoral Junerican academy 1x. 6.349 Anc. Or Canfill El Parter Cam dep 11.20 12.35 London Lower Thools del 4.30 5.47. Casul

Lamer Parker) ard Smith Sunfesous Chris noble Edmand Helle Leckie Chefinel Wichharm n Cu E. Myan Montage Brett Cruckan thorpe Da Cine Godres Las heights

Haberlain, Proc R. Soe 11) Feb 27/1873. p 176 Leaf arrangement 2) mare 23/1874 p. 298 " 13 may 8 /1876 / 158 Crowberry Show that the maxima & stability are at the terms of the 1 3 3 3 5 or feries he fasticular term defention, and distance of the ball from the cidia rubber brown in ne overtical roads a ourial lity per saltum fin a reason ble hypothaci 1874 / 304 to does not seem possible that one could be produce from another by a commulation motification be Summing \$ 307 Compare however with 1876 p 160 where on series in the Crowberry is forward turned int auther by renequal condersation result in spiral dislocation

No prodeer Diocothy Right muruel 14 13 fore 16 (n 12800m) 14 or 12800m) - mid 18. Zing tathers altels Lo Holland Park gardens

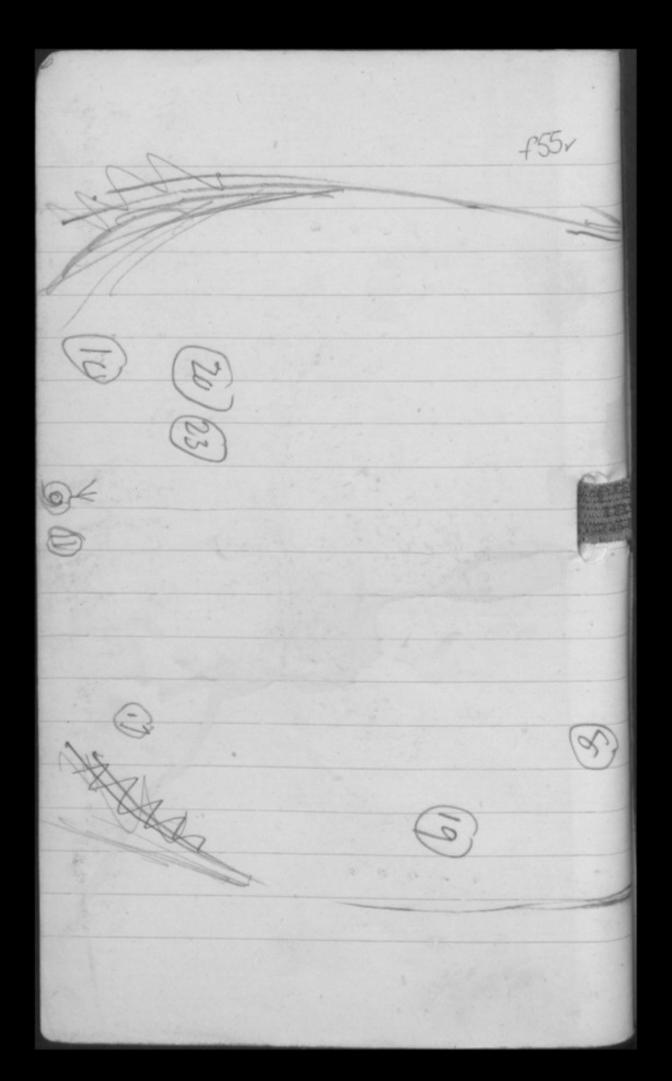
J. Buckman Peffed Neport in Experimental plots at in at the 16b Agricult: Cold: Circulate from But: afroch 200

h. verlagorates - the three forms agr. Valgavis alba, a stolorifera seems referable to a suite bleeces. The steed fore through to the most part coming trace with still heard who occasional exceptional examples of each of the others. A valgari is common is upland measure, A abba in dribber a death places, A estolorifera, in stony bashes be

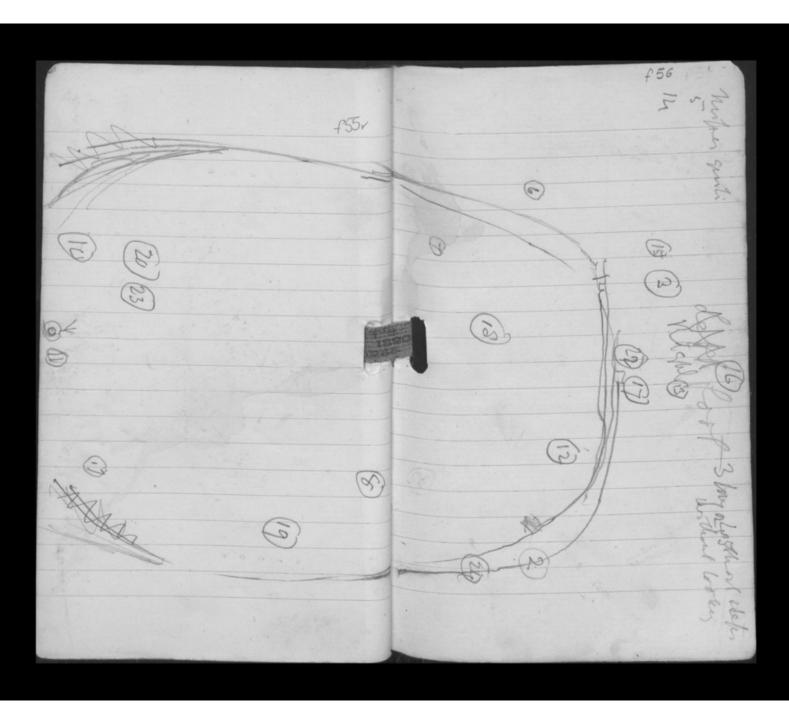
* Tentica lotinea, pratectis, and slation are similarly shown by enferment to be all referable to einch species. Us grown tree in measure 4 to what is recent in a work measure flats. 31 on almost searly clay backs by the sen that a poor threems clays inless measure flats. 33 on almost searly clay backs by the sen that a poor threems clays inless low Brit allow 1860 \$35. These experiments with Festiva wheater succeofully

h. 39 Partinaca Setwa Partinip the Stabent Parsoned plants throwing leading to run into measure of the cabbage varieties long petioles - kale, greens to both with bread, must be left underwed deaves, and with a tendency to deep to be and devitions

The paper in 1859 does not kelfe me



f56 the genti 6 (B) (B) 13 (F) 3 boy of she water



A GENERAL MARKETING TABLE.

The following Table gives the Amount of any number of Pounds, Yards, &c., at any Price, from One Farthing to One Shilling.

	-			-			-	-	-	_	-		-		-	_	- 11
Yards, &c.	14	-	1/2	1	100	14	. 2d	. 3d	. 4d.	5d.	6d.	7d.	8d.	9d.	10d.	11d.	12d.
23 4 5 6 7 8 9 10 11 12 13 14 15 6 25 26 27 23 9 30 31 32 33 34 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	000000000000000000000000000000000000000	91 91 91 10 10 10 10 10 11 11 11 11 11 11 11 11	d 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10000000000000000000000000000000000000	d. 11 21 3 3 4 4 5 6 6 6 7 8 9 9 10 11 1 1 2 3 3 3 4 4 5 6 6 6 7 8 9 9 10 1 1 1 2 2 3 3 3 3 5 6 6 6 6 7 8 9 9 10 1 1 1 2 2 3 3 3 3 5 6 6 6 6 7 8 9 9 10 1 1 1 2 2 3 3 3 3 5 6 6 6 6 7 8 9 9 10 1 1 1 1 2 2 3 3 3 3 5 6 6 6 6 7 8 9 9 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	500000000000000000000000000000000000000	23 0 0 0 0 1 1 2 2 2 2 2 2 2 2 2 3 4 5 6 7 8 9 9 1 1 1 0 1 2 2 3 4 5 6 7 8 9 1 1 1 0 1 2 3 4 4 5 6 7 8 9 1 1 1 0 1 2 3 4 5 6 7 7 8 9 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 2 3 4 5 6 7 8 9 1 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	d. s. 6 4 0 6 0 1 10 1 2 1 2 2 2 2 2 3 3 3 3 4 6 8 10 0 1 2 4 5 5 5 5 6 6 6 6 7 7 7 7 7 7 7 8 8 8 10 0 2 4 6 8 8 8 10 0 2 4 6 8 8 8 10 0 2 4 6 8 8 8 10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	## 1	5. d 3 0 16 3 1 3 8 4 2 11 8 3 4 4 4 8 5 6 6 8 6 7 7 1 8 8 5 16 6 6 7 7 1 8 8 5 16 6 7 7 1 8 8 7 7 1 8 8 7 7 1 8 8 8 9 9 0 10 10 11 11 12 1 12 14 12 1 13 13 13 14 14 14 15 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	£ s. d 0 1	£ s. d. 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	E s. d. 0 1 4 0 2 0 1 0 3 4 0 2 0 1 0 3 4 0 2 0 1 0 3 4 0 0 3 6 0 0 6 8 0 0 0 6 8 0 0 0 6 8 2 0 9 0 0 0 0 1 0 0 12 1 0 12 8 0 13 3 0 14 1 0 0 16 2 0 17 9 0 18 4 0 18 1 1 0 19 6 1 0 1 1 1 0 1 1 2 1 1 3 1 2 1 1 1 3 1 2 1 1 1 3 1 2 1 1 1 3 1 2 1 1 1 3 1 2 1 1 1 3 1 2 1 1 1 3 1 2 1 1 1 3 1 2 1 1 3 6 1 6 1 1 1 7 6 1 8 1 1 8 1 1 0 1 1 1 7 6 1 8 1 1 8 1 1 1 7 7 8 1 8 1 8 8 1 9 1 8 8	E * d 0 1 6 6 1 0 0 1 6 1 0 0 1 1 1 1 6 1 1 3 8 1 1 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	£ s, d. 0 1 8 0 2 6 0 3 4 0 0 3 4 0 0 5 10 0 0 6 8 0 0 7 6 0 0 10 10 0 0 13 0 0 10 10 0 0 15 11 0 0 15 11 0 0 16 0 17 6 0 18 0 0 10 10 1 0 1 3 1 5 1 0 1 6 1 1 1 3 1 2 0 1 8 3 1 5 1 0 1 6 1 1 1 3 1 12 0 1 16 1 11 3 1 12 0 1 16 1 11 3 1 12 0 1 16 1 17 6 1 18 9 1 14 6 1 15 5 1 16 9 1 10 1 11 1 12 1 14 6 1 15 5 1 16 9 1 14 6 1 15 7 6 1 18	£ s. d.	£ x d. 0 2 0 0 3 0 0 4 0 0 5 0 0 6 0 0 7 0 0 10 0 10 13 0 0 12 0 10 13 0 0 15 0 10 13 0 0 15 0 10 13 0 0 15 0 10 13 0 0 14 0 10 13 0 0 15 0 10 13 0 0 14 0 11 15 0 0 15 0 11 10 0 11 15 0
Sec.	-																

^{*} One Quarter of the Hundred Weight. † One Half ditto.

胡蹈蹈的

fota 1 Longmans 1895 . A J. Balfour S. Kart requires to be re thought by Englishment & refer the chips of the Arran that Englishmen will assumitely all but the grounds on which they accept it oliffer " en & This - Code of know & duelling in a X society - Lout Effort of western nations as against quieture - celibracy. 13 No moral cote can be Effective which does not inspire reverence (1) Traverence is a combined of love & of few. a moul code may be based in sither departely. Love - the children carrying out the more fancier of a Pecesier parent; loyalty self sacrifice of a lover. Mother's teachings. Her of the worlds openion, If he law If an autocrat . Discipline. 13 The colorest of a cost & exerte reverence be count be wholly (2) independent of its accepted origin. Her estimate I nativalism seems to me argors exasposaling whit follows from his description of by. Smotional of which we are made. They may be infinitesimal in Sail particle but the battery of a vast mattitude forganited particles quais finite Effects 7 14 re the concluder from (2) that the naturalistic creed cannot Sycile Robbeach 18 Karl compares the moral law to the starry hensens. The naturalist might compare it to the protection blotches on a beetles back Sclerminism & free well - He suggests / 20 that the dution of free well must on the regularities by hothers be the result of natural selection, the fatalists in practice perishing - 121, the cornery of all morekind except a few 22 Savager certainly believe in their own freedom because this allribute thentaneity & natural object, anthropomorphically. A foot whe throws doubt on the absolute uniformity of Nature - "at the moment of choice no uniforming of anticedents need ensure a uniformity of consequences (the invotes it illusion) 24 a fatalistic leader of it toping in the ments of some of the greatest mon of action, which foer not weater their volition but



24 and a finer lember their converge. Stell a general befield in deleminism does really conflict with the sense of personal responsibility 25 The admiration accorded to a violatous man would become the 26 Mare the ends prescribed by morelity about ! (onthe naturalisticky) conflict between Egocom xaltractor, unequal distribution of habberies with 3 27 no fature state & Set matters right 25 Emotional adequacy - Felicity of the sentent creatine - but man diaction Eq is so carningeorteat, moreover he is (naturalizable) a mere accideal (fine passage about the blumberry) a poteness of man) 32 our practical ideal is beggare by these throughts Chafe I Naturalitar & Osthelic 33. Osfrelier weless to preservation sind be by-prostructs Take Music as free from objections to the last Parchitectuce centility by) a precedeling taste is needed the favorable varietion 38 Spencer's muscular contraction "Att abot tomen ke" and the worder there deduced have association se absorbte of the founds that the have us associations give no delight a those that give delight have us associations 44 Discordant views of beauty - Critical traditions 49 the outlit of a crisit in as much intellected as emotional 50 fatheron in grees, 53. The general tendency to agreement - sets a colories 59 heart process butter pleasure grown & their touch Income guestin does not been to vease Chapit Walirelets Meston The non-rational origin of reason [Is that fair .] It is most in proposed that our sendes are soon approximatel areguals 73 Newson Creater leabsts by the it is itself tapplanted 75 Shencers trast that man will become so perfectly adapted the tarroundings that goodlets will be automatic - but so will read on & at that time we shall be iditie. Sensity poorer by their deposition of Reason from to ancient position to this Haulthenest for muintaining greenic life Mak TV Summer of att I.

120 perhous 240 5 symbols tone word give Bo word per know in fort care, 40 is secolare ought one e96 two 296 th ree 296 four 291 five 291 SLY 291 seven eg L eight nine - 291 117 two egl Four towo into 1/8 three eg/ SIX, two into four egl 219ht 19 two exto six nine. 10 the 2 ce in to o tipe and to milerval = 3 symbol two Egil 123 two into five egl one ought two into one ought egl two ought 25 three into one ought egl three ought 26 2 23 one ought into one ought egh one ought oug Dell'smined than far - numerals subject to farther verification Equal, sign of multiplication sign for be subject to further verification

		Crom 120 5240	sulph squibbly	per hoar 4
Begins		interval		2
			0	
		2	1	f60
		2	2	
	~ _			
,,,,,,,,		=	9_	
36 52	mbot G	n 20 single	10 doubt	76
				10
2 x 2	= 4			
2 × 3	= 6			
2 × 4	= 8			
2 ×3	- 9	interval = 1 suit	Vi culat	
2 * 0	= 0	notion - 1 said	4,5	
3 × 0	= 0	interdal		
2 × 5	= 10	14000-1		
		interval		
10 × 2	= 20			
10 ×3	= 30			
10 *4	240			
19 × 9	= 90			
	,	interval		
10 × 10	= 100			
100 × 10	= 1000			
1000 × 10	= 10000			
		interval		
2 x h	= /2		5-	7
3 × 6	= 18			
4 × 7	= 28			
8 x 9	= 72			
	18 3h and	orbe		
28 18 21	36 72 dink			
n 56 36 42	20 /2 200	le 242		242
End _				2
			Total south s	you 61331
			add (or	334
Numerals u	ichatry o tel	great to farther or	reficalità	334
* and = a	ud de	Da		
Begins and e	nos will be	fuelles illustrate	W .	

Begins 4-2 = 2 8-2 =4

10 - 5 = 2 8F = 9 = 9 144=6=24

4+1 = 5 5+1 = 6 9+1 = 10 100 + 1 = 101 209 + 15 = 224

4-5 = 4 5-1 = 4 10-1 = 9 100 -1 = 100 224-15 = 209

Ends =

2 2 10

10 12

12 16

18 20 #

225

"numerals" further versfied
"Besins, "ends" ... decimal point

10 ÷ 3 = 3.33 be 100 ÷3 = 33.330e 7 :5 = 1.4

Begins 2 25 the hours of 2, equal, 4 4 32. 10 9/16 48 10 49 10 14 14 16 (2x3x4) 72 (3+4) = 32+ NA + 4 H AST 42 5 4 32 (a+b)2 = a2+ 12ale + b22 38 = at + 70 6 + + bn (a+ ba) 32 86 (+n+2×(n+1)×2(n-2)/2 23 = 8 24 = 16 Ends 254 Confirmer "begins" "Ends" "External " " "

Confirms "begins" ends
brackets
to the power of
binomial theorem
generalized numbers

2 = 16 f62V 25 = 32 34 = 81 35 = 243 distance certre + perimeter = . v. for brackets = Itelia 52= (2+3) = (2+2+1) = bc $8 = (2+2) \times (2+2)$ Bo = (3×2) ×(2×5) Sun (miles) Earth "you must let me know all that you fed so log your antenna on mine" dotted insication of aren heragn = - . a smoothed key ag = aree = ciril nonagn = - " " trivoller =

abadefahijklmnohia 2TT = circumperence with work OA = OB = OC & 13. ×3 AB=BC=CD bc 0A = a 0B=6 Ne Md Ng Pj Qa M = Squar a p 7 9 m. POX5 = 400 QbRfSjQ = Spectat A = 641 for distance we bradels ()

refraction - prim - colores ramboro. Telescopes there & bibrating string - pipe whistle Salvin & ring both ways perspect & in plan Features of Rainth - of reiners Cross - Orion Potition of planets at date

	litteratisets	1/2 3 1/2 5	**************************************	£64r	8
,	7	is - for o		2 A. B = 74	F/3
32 =	= 9 numer	als 1 trg			
33 =	27 signs	of operation, &	points of a	eference, l	hi
	a 81 of there		In track 5		
33=	- 721 were	ds harate deb of his	hali	Pail Jan	An xo
740	e required made	by interval 1	3 at Eard	Nº 33	15 12
31	e required vache average 6.0	Shorlest 4/2	8.0),	3
32	10.5	7.5	14.5	numeral 2	19
33	15.0	10.5	22.0	signs 3	127
34	19-5	13.5-	28.5	Thumbs 4	181
35	24.0	16.5	33.0	words 5	1721
× ÷ +	contre contre r=distrate	? 7 tubis	Freferena Nary ones		
to pour	triangle Squere heragen octagen detted methods Snorthedo	tobergon) attire of utline angle	é	GOLLEG GALTON PAPERS	LOWOO 3
perimete centre	or of circle arc chord	lel to it then			

f. 64v 6x20 = ATTS = Squild 1 3 = (perimeter of) (9 quilat a) side 1 ARCO = (spend for) Regulated B) Like 1 2 8 4 = hemmele / (square) whe / 1 = area 1 perenules of area 1 Tabin /

TT = 3.11= AB= Bb= CD= 3A 211 + = (he uneter of) (circle) (radius) (r) AC ABBO = doubt IT r2 = (area 1) (circle) (radius)(r) AB informallal & DC 2TT = (perimeter of) (circle) (radius) 1 TT = (aread) (circle) (rabius) 1 DC (ABCD = Square AC = BD = 12 DA = AL OB=OC-OD AB=BC=CD=OAJ=1 ラ友AC/ラークA AST 2 = (assect) (senere) d= (centre)th AB = BC = CA ABC = (equilateral) (Triangle) 1/2 AB2 = (area of) (equilateral) (triangle) (points in a) ABC = circle A0 = B0 = C0 = r = [radius] El Cadiction or own ages of 131 Sher Miphole = 18 883 Earth) Sarth 2r= 1 Sun (distance =) 1 (from) Vens Venus .39 mari 1.52 Saturn 5.15 9.45 [r] herineter of (circle) (Certoe) = Shaight line A + B = m Btc = p A t C = n+p A = straight line

C651 9

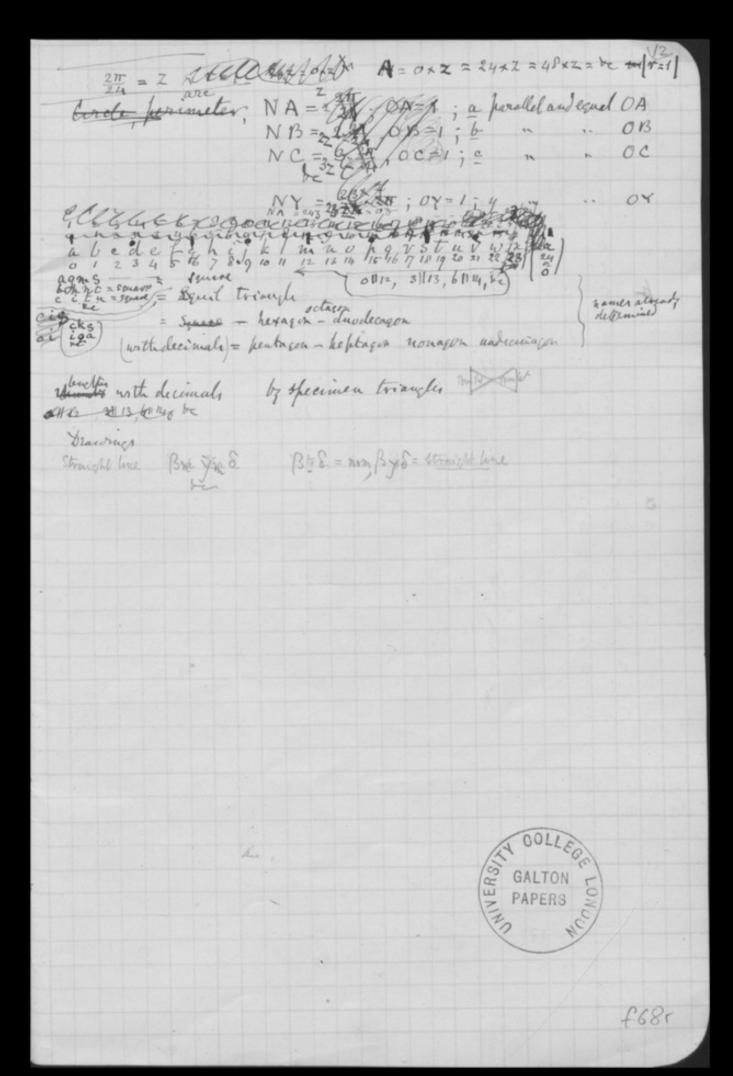
f.65v anglet and chording (30° 60 50° 12 1.05 1 00 90 18 1.41 3600 720 211 0 A B DA Parallel to Perimeter of circle : 2777 NtA = 21 = m Nah = 2m (chord of) N/A= +, 1 216 to B= -7 = 0 EA = 0 EN = 01: CA

f.66r (10

QH tipes T - 36 = A-13 = B-C = C-D=D-E = E-F=F-G=G+H=H-K 0-K r = 0.A = 0.B = 0.C = . . . OA = a OB=6 OC=C - -OK=K Begin with a 3. division 27 AAAB - 1864 + C67 11 = 0 t A = 0 t B = 0 t C chord Anc 21 = A to B = B t C = C & A = 2 cor 30" = 1.73 For aren v chas arc = 12 The angle = 72 chord = 0 arc = 1 1 chard = 2= 36 = 2 21 char = 1724 = 1-73 = 1 chord = 62181.41 = 1.41 = 14-4 = 29 -> too wills will do

24 grade, 1 grade = 150 10 miles 0.1 wich 100 1000 day 1 ft 1000,000 ty 1000ft day track = 333 sants (slass here) 20 /2 to indicate say 500 goods (10 seros) 2 1 man = 50x50 = 2500 men (50, seros) 2 1 man = 50x50 = 2500 men

buther trial July 29/96 with 24 rhunds and decimals ward wasted are !angle · (numerals) fe. chord is approx val circle figure with no finter = 34 hr, 12 2 brackets approx value 13 Received point 11 destance believen 14-18 + + x == periester equal an perallel area Thurst with decimaly wo . I show !n by binomial permater cealor funde V numerals , + = , decimal point att are esty perinter of circle = 217 of Sides in telius (which ander a contre) area are and correct (v=1) of the contre of t Outre O sines covines a tangento of (arcs) - angle constructed, source sade f. (andle = 0) a parallel Thumbs - with december fare - to of length to specimen towardles where ON = 10 probled examples there there to Drawing a to be obligare ? lentige) deckerger Sun and planets & their clives clearly contine of Salities of Salities of Sartex M - position at time of planets S' Bar a point, to N. Souther Orde for S. Some ares applied & stars as pictured Pistures man woman, womanichett. relevedues. methal of himolley



						in dosner
a	α	a	+	0	N	360° 0° 15° 30° 45°
	a	6	1	1		140
	a	b	3/	7 1		300
	6	a	5	3	NE	450
	6	6	4	4		600
	6	1	B	5		75
	6	abeab	D	3 4 5 6 7	E	75 90 105
	t	6	8	7		105
6	- C	0	5			120
6		a	8	8	SE.	+35 120
	4	6	12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9 10 11	SE	150 139
		C	4	10		150
	1	a	12			165
	6	6	13	12	S	180°
	6	ط	19	13 14 15		165 180° 195 210
	0	a	TE	14		210
	C	4	7	15	SW	2.25
B	2	1	7			
G	4 1	1	4	16		240
	al		189	17		255
	0 0 0 0 0 0	4	128 B B 12 12 12 12 12 12 12 12 12 12 12 12 12	16 17 18 19 20 21	W	270
	6		Eg	19		285
	6 6		45	20	***	300
			25		· NW	315
	c a		147	22		330
(2 0)	24	23		345
6		,		24	N	3600
						200

ount-the 3 egend

3 different signals are used

Nº of signal to rad sumbol		used for	Average time occupied				No	1
			sinthe signals	intervals petercen signals	hants of word	Total	hour	
1	3'=3	On decimal point, distance to	3	Second	3	6.0		
2	32=9	numerals 1 tog inclusion	6	1.5	3	10.5		
		24 for rhumbs . 3 spare ones	9	3.0	3	15.0	240	
		Signs of operation, be	12	4.5	3	19.5		10
5	35= 721		15	6.0	3	24.0	150	1
6	3 = 3605		18	7.5	3	38.5	126	

be soronge similarly possible to conference Section. It Been, Souther Cross orion Planetag Explin at Late Talesafie

Opportunity approaches sh'- be seized (letter by an Amateur) of housest
West of the opening we example. Carthe fish an begut deflered soon headful vertebrates unthout antennoe no intelligible sound present - just an answering flish, no more - useless accomplex or costly a communicated by officeal attraction who something the production of officeal attraction who something

anateur attronomer. letter tienblings fun bright crewent of Parth title tool more interest them Sun on the they have a perspective affection - recent for them. 3 timbs made of petities.

New the attraction of heavier transcrime that is bount of sick cand peoperate letts whe is get mounted as away rank to make.

Anation or train. There is no don't ado of their leter ough, character. - but no char get to their necessary. Part of the opening of the hours. Scramb are mady only from one from in the sarch of an are so timed that hours are send in the sarch of an hour so timed that hours are send in the sarch conditions and the sarch that there are apparatually a face of a hard and a three arts of the sarch the sarch that there are a processary to the start the sarch that there are a processary to the sarch that he sarch the sarch that there are a processary to the sarch that sarch the sarch that the sarch the sarch that the sarch that the sarch that the sarch the sarch that the sarch the sarch that the

Official astron: grandles at decimal bystem a speculalis in its cause

amateur attron: announcement of drawing. much remains to be excepted Ishers in long series

Newspaper Jokular account

anabur astron announcement of pictures of Earlt folli, horse, binds, ligered, and; batterfler Philosophers betters in female renters

mule writer a letter.

Speculation as to how to refly a cast in the motherst communications

will be found y free (a serie / leller which In the following paper I be continued as faith a treatlating of protectes that Inche will appear in the former pageta countries newspaper in the planet Mari about the ruist the fact promises century. The translation is and fact the former all and promises considered the translation is and fact the planet in the promise of the promise and the promise and the promise and the planet as faithful in former to the went defermentations were where when the mars folk took differ quantly form on our Their our namerical them their rules and forth ever translated with order. It have been forth forth ever translated with order. It have been forth forther additions their rules are forth one translated with order. It have been been forther additions their rules are forther one translated with order. expedition be terhestistised so to theat some of the expression) and of which would be be misinterfreted or anistellighte without espiral with fleplanations. Their book would see the second incidental service as well as interest to the sludents of the ocean's from the ocean's second second second in the legitimate demand of the ocean's second second in the legitimate demand of the second in the Later The Single of the Mark the Bellowa layette the last private the series of the last approach the series the court will approach the series the last the last approach the series the last the last folk as a brilliand there should be series the last folk as a brilliand there should be series the last of the earth folk as a brilliand there should be the last of the last of the last of the last the las to which they wicht restion so soon when the earth way moved so far from the direct line between Mars & the dan as to prosent a luminous crescent, to so. In short the micht timal(Es) firett freely during the beginning of her first quester a toward the close of her third quarter. She would then be at from about to millions of mater from at for indeed but not too few for signature. I he cost and magnitude of the highestly appearation that is professed would of course by our goest, but not insurmously If we consider in the one hand the acres of glass winded for wontons a hot houses to the the magnitude of one prepulation it seems not at all unreasements to the that some bracking theme might be found by which there with defending the wind of the simultaneously represented makes the charge of two rules, with he simultaneously the other the overs of forgle may one of whom should intrate the directories who the other the duration of the flather to methodiscole who desired to make themselves famous himself might care through the undertaking. Optimist.

180c Respire Figers f. 702 2 Letter from Enous Juice the firstestal to Optimust-yould be too abfairs to a phetorophies to restice were it not that enthus water is catches and that god perbably tear among your numerous readers there are may who were both enthuristic a ignorable to west of quidance before they cated at as whether for the form of will not entered the properties of the course which the form of the property to be the first the best of the course of the form of the case of the first of the case of the course of the case of has fores no done to of value or provey that the sall con inhabited & observent & intelligent beings of block brokets

your inhabited & observent & intelligent beings of block brying and the horacter that would be the begins by have by learn another the horacter that we continued to minimist the means of rational communication for among control never learn shall not mod would be known. such as the forces & features of the Exhabitante of the Barth their industries and inventions, their social life , the exact horsible their intellippene & so forth. If this iser horsible theore we will their property experiment high interible reasonably be undertabling totage messe knowledge that we signally could achieve in the laditional belong of their interior to their that the property the experiment would be allersed in the experiment would be allersed. fice of waste but follow Restrice funion

C71 150 Sin the heart for proposed in the letter of Optimist are almost to absurd to interest the proposed in the letter of Optimist are almost to absurd to restrict the state is so much interest when interest have a superior of the little armond the strong and as have proposed to be an expension that the proposed of the superior that the least strong to the superior that the least strong to the superior to the superio be to we it lead to? we should them learn that Earth was inhabited by observant mechanical creatures havi some understanty; but begand that usthing. Thank world have to to speck, waved of flig tomething. Earth with after some weeks in months, would bear waved to wife refly were firshipt forthe to the common to a to the with the wind the sound to the total to the common to the the wind the state of the total to the total the to to Bet culosed the Even under these most favorable supportions the costs undertaking would lead to rest to nother . On the other hand the brobability that the larth is inhabited by escalures who could a would allowed to reply in small. Its animals and plants and plants and plants and plants and plants soon differ widely from our own and however various a numerous they may be it is scarciely little than any one of them should seep lear arrived at the wester statury of mars folk who are the lords of all living things in their places in freshow he had the warresse. Yet the styletistal confliction prove that we are more varieties of the common and were varieties as the descent of the common and were varieties of the common with the descent of the common and were varieties of the common with the state of the common and were varieties of the common was a superior varieties. the hard skeleton that tupports their frame in like oars mexternal their population are his led with festile females males and working neules and to en own through and in the same proportions. a happy The only heall would point in our structure in the arrangement for expelling airy through a reed like structure (in various ways that beingthing a variety has can different straits and a complex and toy apparatus that enables up to heaved rethinguished their tonals) and so to speck with heaved at a distance.

The we and the artest are moved with the first principal senses, that in the see see, heavy feely teste and smelly and have the artenna-tact. Therefore although we are valle to the fast in height when we although we are valle to have the poor ording posture I the intest and although our faces we mouthy cor far less wromathers than their a although our faces we mouthy care for less prognathers than their a although our faces we mouthy ese far less prognations than theirs & altigethe more shopel & defpressive and although our fore pain dimbs one furnished with delicate apparatus for touch and good your mind pain on refused to powerful the do not about the essential similarity. When one of our artisans is sisting aspect on the ground staged by their diverging him legs, and granting the objects on which believes the class of his mildle limbs of as in a vice, "the which he operates of min with his heads, The looks just like an aut. How then can we befret

(Upl of our ancestry that ranth folk mones have followed the same particular line as porcelar to the insect to form is affected of sen developed in a men folk, indefinite months of different lines. Nay why should their shouldness, have originated in an amention of severe? It is conceivable come that the vertebrate class of may have large facilies for development and that the ruley earth folk may be related to the slow wobstinate ass) so to the agete & mischeoons morkey on a any how it is most improbable that the ruling earth folk of that there be, should have any features in common with ortholds a that that would make, intercommunication possible some of the me had the all the letter to rated high affection mad by the seems that the hope that has anoth brained multimarie to the company of the property of the Letter from automate the astronomen which Bollma observatory the street interpolation reasons to learn that Certain phenomena) in the careful and bearing assertants part in the surface of the Carette contains to the carette contains the carette carette contains the carette carette contains the carette contains the carette carette carette contains the carette and contract of require careful investigation with a Juste powerful leteriske than their observator has at its dishoral. It is well known that as small dece to the reflection of the San from the face of the organis when the water is calm and the Aky; clear, and The phenomenon to which I am about to speak is also a luminous speak but district, smaller a more will base property the Sant finite party the Cartle sortace which is part on agen A what topics to be tracts of Anow in the Subtropical region. Their ales been described as rarely history and apparently in a hurstotion way and apparently in a hurstotion way and apparently in a hurstotion way as there was the think of the termination of t the efficiency of the largest water my control would suffer to carry out the desire best plan son in the present a song of the extremel coft to produce the mention of the present as sone delicary of definition might by sacrified in order to present of more who are since and since and the present of more ways and the present of the ollumination and magnifying forver. (for I for the traffice die 1) Bellowa Observatory

1.25/6000/47

The leutence in the Sarlies rulesage contist of out fine wood only a pulsar several occase as the average about 1 /4 minute, the between 40 x 50 bedrase, and toursented in any hour.

Wi a curious fecture that some of the mescages control manif of words of only 2 letters a others of words of only 3 letters, thoughtown the maker of the care there can be bat of varieties fthe former a 27 of the letter and yel though word of 4 a 5 a come bletter an not in frequently sail. The messages

Paragorable 4th Sisters of the Nellower Carette in that lear become and love and pleased to announce that they have teleted the and arrive or the felloward the Belloward of the council harollike are much from the felloward the Belloward of the council harollike are much from the largest to the felloward of the tearth which are the largest of the tearth of the felloward of the tearth of the formance of the formatter of the time there be austraced in these columns. In astispation of the appearance i prior of a procession Report ful made & In anticipation of my thing between the Board & Birectors, I send the Wood I think be most of my less thanks I gen for publication will obt. The new tetes cope fulfils the expectations and enables the flasher from the truspace of the earth to be clearly seen and they appear the andoubled signals directed to proselves but what may be their recessing I have as yet no clue to decipher them. They Costitt of what may be galled messages that last for an hour of Costitle of what may be called messace that the the was the said t the tighels will I then be got over by a temple instrument now under construction. Wir a cylinder covered with paper that resolver thought by me clock work on the ares causes the in a spiral direction. It heard is pressed during the duration of lack flash which then a spiral record is left on the cylinder of all that has occurring the time of observation which can be fear off at statical at pleasing the manuscript read already made which are I report to the per important of the mall maceideals which were has already made in adversaring to the melsages received with the standard made in the sure has already and the sure has already and the sure has a sure that the sure lands of the messages in the others. I gutter from their that the striples of messages is not write that the striples of the messages is not write that the striples of the sure of their being correct, gentle I fits, his deficiencies that may occur (med that the one which is the most often repeated contains the clue to deciphering others)

gosley deco dignes 0.15 words 30 sentences .45 40 negrage .60 60 30 three grotler 05 1.35 1.50 2 eggnel figures 10/2 he 81 yords 3 simple zhumbs 20 100 2 150 300 450 wer of 600 900 1050 1200 1350 quarter diti take 4/2 1500 10 1650 1800 12 ton for generality as letters numbers to 210 9 x 10 /10= 94/ 13 9x 20 14 2250 15 unon Sicholy 2100 symbol 2550 2700 2850 3000 150 19/2 315 243 330 345 360

teen a treat time so before the record of the remainder will be equally and the remainder will be equally as the records of the remainder will be equally aself and ready for study, and the remainder will be equally aself accordance before long. Editorial paragraph in 2 " estim special. has been the place that evening of which informed little often Upented in the worth of the least the most extraording in the worth of the little often Upented in the worth of the last of the worth of the little of the Upented in the fill determined its the giables of their meaning with the countries of the countries of their meaning with the countries of the count isterval The article hershaper. (Lare type heading I and the message front Sail. reallied through A most able the room was crowded to excess and the antennoe of coll present were in constant a restless a retter a retter asite in the walt, were suffered enlarged the Ellestrations, to execute by wears of the lant leva, shewing in thecessing Ever one of the phraces in the first nessage to the which were to assauced that their warming to work for the most fart one of the their warming the transfer war for the transfer war for the transfer war for the transfer to describe the transfer to the tra best explained as below in which the word that coverfing to any siven without is printed in italics a brackets, but when printed in ordinary type bal still in brackets in there is there is no need to passe the reader at first by lapting at the tymboli thereselves except in their actual form, a soufle of them will suffice. Thus -· Alex in found Pade mersage has a trial heading, togthe for the reconstal we want & which more hinedly then their later 10 minutes · de (equal) (Me); dot dot. (equal) (The); (exact) these, be up to 10 ...

f74v unknown ? (34) n (4) n(Z)
suscerted (plus)
confirmed (plus)

This toggetted wherfrelation in confirmed by sich for 8 qual Mus egnol (1) (plus) (2) (egual) (3) 1 -14 = (3) (Mrs) (4) (equal) (4) mon (9) (Mus (1) (equal) (10) == 101- 11 and of the same time the tight to plan becomes known Similarly as regards the sign to tuntlift fibtration Then comes the the farther step I multiplicationestily which the whole process of decimal arithmetic is explaines 2 (mullipleed int) 2 equal 4 equal 10, 2 malliplied with 3. (multiplies at) 3 equal 6. equal 20 equal 30 10 equal 100 10 10 100 10 Egnal 1000. Mex indivision which became 6 divided & 2 equals 3 ha so on and then a series of case which introduced the decimal point a confish The sad as 10:4 = 2.5 3: 2 = 4.5 9:4 = 2.25 . 7:5=1.4 (= approx)-2.33 Their message closer with TT = 3.1 ... (=apperox) 31. GALTON PAPERS f.75r

200 nessage C) + A AMC = Sent (Do Down MSC) 11 = [apteron] 3.1. perineter = 211 x ; erea = Thr2 (arcle) 27 = diameter perisaeler = 24; area = 24gon) perinetes = 12; area = 3rd mersage 28 mm 8.40 Picture formula ((24 gon) (Picture formula) (12 gos) 8 809 6 gon 11 42 25 (Robert former la 1) (3 g/n) = Picture formula of (Agen) = (60 5) Pirhere formula / The diameter Kitimelers) Carth distance from Su Venus rapin formatoring 1 mars Julita to (East Day) Easth thereof (wood? rous) sun, saftle herd of revolute row upen 24 1-30

fftr See details in last page p.20 2 - message Sua & planets distances fecus sun diameter (inklumetres) time / resolution on respective axes in Sarth days Taking Circle peremeter (24 cm) (8 gon) (5 gon) (5 gon) (4 gon)

if with 3 Number rack will outlein 3 x 6+10) =

48 = 43/4 minule) maximum cale

tee further detait, p. 20 22 C481 3- menage Picture formule (Pirture formula /) (2490m) = 20 | Portree formula d) (3gm) = (() = () = () = & 5-4800) = () = () = () = () = () = () = be (Pson) = ()= ta (12 gon) = &c (24 gon), = h-A, 9 average has Picture formula of treangles, with one sides not integral as angle ... 4 12

AC = (127 half (went + quester)
24,24,6,10,10,6,24, 20,6,24,11 mil 160 sur 30 stemb iteste 105 ath half figure Half Stewen 35 number order of hisrals Smille diet ABRAH Lag 6 x 24 = 144 ton Each letter means 2 fractions of distance 6 x24 1-C round to B round t E (Bicline formula) Half Salwin maddle chickles A Eductiona J Thumb] B B [dictiona] [Thumb] H

4 message 3 humbs to I reinste Nepeak the rhumbs 8 minutes Half Saluri 45 minutes 5th Rorth view of globe - few many 6th message Eman woman child sach with 80 thunk = 240 wall = 60 min

t80 6 less like Centanos , faces like diver's costume - us hearing - acteurage Tremony, Gestive communication like deaf meeter - Oxford Chefel - Middle limbs with clouds, artesais used them Neules females - pacció la votine work lehe women knittegis devong, love of Esser & larvoe - aversion trules but consel & them also contained their suprema all round. Event fear of a reflect to fertite females neales vivarious worlder of jealous darie briefs beaton of love - chivalorus and heelong elopateix unit gentite and remised with them - Logal Exertit females in different to in despute of the makes - Horse writery - Jas manurous eggs al one seaway of the part - no care to them to neales females do that - They telet the males a rule grown crops not love. Execution of about I in 10 in mater and allowed to their hand for the mention from the the finite that ant hear followed their supported and the The tocal texten is fall of interest but will not be low held on here - Tway Commencities, usually at war Mars Mavors Bellona voar battle warren arms swood spear lance dagger club nance arrow bow cling archer bagonet mail broadsword Spir transet dram murder homicide fury ates, hate despacer grown, agony shried yell blood slaughter wound gash victiz conqueror

he In folk wa countedly of the wissel to and resemble aut, in many particular, though vertical larger than and more with developed they walk on the four hinter to their fore have of limbs and they have they have the fore they and white and in home of a and variety of grathe and in the delicacy of touch thought of course they differ great from hours in the last made a hind frein flinds are attained. The wall, up the middle part of the same arms free they heave, a resembland to promise with their heave great a factor of the same they are they heave as they are a forther had give the factor of hinter of the factor of the the toucher had give middle pair of hinter of much use the three of and write a powerful hair of claims a warrenth of much use to artisans at the toucher had give the topped formed by the said the body at the toucher had give the formed by the body at the top heave they are the supplied formed by the said of the body at the top heave they are the supplied formed by the said of the body at the top heave they are the supplied formed by the said of the body at the top heave they are the supplied to the said the body at the top heave they are the supplied to the said the body at the top heave they are the supplied to the said the sa the Rad of the body & the two linder limbs then gonspien the Object the are engaged in fasherming between the class of the missele pers their hand are free to oberate when it their skelelows are fine construction of the missele in an fine construction of the contraction at the force of grant on he is only one third of that on the E their sente of hearing is almost deficient but their rige power is a cute and ample. This lateral eyes of the motore to be (as in ants, and always in these is they consisted a vast number of facety each of which about a bless of light to narrow that objects are in focus at all range with the retail that rotter except a land the which is are in focus at all range attraction attention. They are therefore almost the whole for a rotter in the withing attraction attention. They are therefore even more alive to what is going on around them than our deaf. Much him he will a supplied a terms of a strong testion of a strong testion of the strength of the same order as our own to their and contract of the office of the M. folk now extract they are minute a distant object of vision and a proper of their wastest of their as with the keeping of the sound of the sound of their wastest experience of a strength of the sound of the sound of their wastest experience of the seement that I will all their wastest of their wastest of their season of the seement of the sound of their wastest experiences of the seement of th and so is that of the lond in cestains parts of the body, therough the merin of hairs which has through hoter in the externed armorer to is delicace, I word, are the entennoe where in conversation between tocial equals and foreign are in constant movement and touch. They convey ud only as much as ortrans mens women can convey by graves realer or rather, any gestive interpreter can make out from them. Their beculiar porver leads to curious cuttures, one is that in difloundice

£ 8/v 14/2 weerles 63 Cb. 48 × 100 = 4200 48 × 64 = 3072 3072 48 × 25-3 x(22)

Conferences where westever is "said" (i.s. conveyed by signs) at the consect table, runst be shotey to all the members and
obliced to week and soit of the of helmet with holego he mes to judice
contain & conceal the antennoe they jublic ulterances and is judice
lawing like that of heat mutty which was a seen in operation and smiles in the Rad muly
cholish is offered that benefit they so graphed understood that the fulfit is to be seen in the base
when the tripped the benefit they so graphed understood that the fulfit of the graphed in
the heat the benefit are divided as the aut, are until further formally for their proteortionate numbers differ currherably. In the same community there are arrally may fest to females which is carel the care in oats ! big one of the few exceptions) and to that of these there are about half a rosen of a disen males. The slagion of love in of brief duration and at other times of the year social life proceeds calcul even among the males though they are always aft to quested & first in Higher cultures of honor. Life is begun in the form of an egg laid abord a worth after the close of the making lease in tender by a newton formall. Sach fe the female large a tarre number of them, with title Horain to her health a strengthe. a first and there cares up raire about the object by returns to her usual housestop a grown tipe, while they agas are consistent by the newton females, and the sealer of the strength of the sealer of the se hatched which are leaded with great care is the neuters botes assistment rette x record their physical a rusting beculiarities which destroyed for feld Reshaps 20 times at many loss bases attadement of the realer nurses to the larare is of are intertedual incapable of true affection. Can how they nume a work then and observe them sedulated, and notice the time charges to consultation takes place the time charges whom it have appearitie le televirable le preserve Some few unpromise larone will turn out because it is of oboroux importance to the community that the selected larva should really be the bootfittent and it is only by careful test experiments that the tules under which the beledin takes place than be confirmed a the rules boundas gratually in prover. The larvoce lead a furely sential existence food feeding a following an about service their numbers and the time of the form intended with the began there there there is intended, while to the file of the first the first that the service to the file of the service of the first the service of the ser

They then thow signs of approaching hubation less are bod placed that the thorn significant of the placed accompany to the sold with the titles were the whole the words the what the water out of unpatritue but a continuous changes, until the linie comes that they burst their continuous changes, until the linie comes that they burst their continuous changes, until the linie comes that they burst their continuous changes, until the linie could be the part of the part of the form of the form of the form of the first of the form of the first of the and emerge the as sperfect. In folk to fav as plustical form i concerned. Then follows a long period of which may be called school a college life, after which cortain probationally tests with accompanying ceremonics are gone through, and the probabation receives the fall right of citizen thep. I'w like for more thang thear can now be thought deteribe the social life to differed from our own of these communities whose bookers the statistity rest, largely The the divisit to of the contlituents The fertile females grown it over the males, they are superior to any one of them in tipe a throught and said is the constitution of the series that attended the forther than the western materials to also the other to all allackness the fertile females do not attended the fertile females do not activistic desired the second to make the malest desired the second desired desired the second desired desired desired the second desired de distill our another but they are too featour a self contained to mediat friendship had keeps her own covor is priorte to and they intercommunicate by realist. The males second formally possess no quality that we should call boreable they have not heart to person with a first the possession of the country occupy occupy to the proceeding to the formal for feeth worth a country to the thirty of a moment wheather the source of the formal possess is socialistic. They come care little to the themselves that much for the community, and though my very obstinate in small things are practically directed by the males with the concurrence of the country. with the concurrence of the queens, towards, where they affect wild a peculiar altituded rum special on neither of love nor of to full but rathe, one of respect to the lemporar representation of a light heready that the community books becomes extend by not replementing it through their 8751 that andtas & thom. and defects four race - they have all the community "hands" in a factory, but, distilling on contemnis them, but as member of a different focial Atration who have the beall contre of history rebellions have occurred, mall of which the reference and concentrated action of the worker males have continued blood bretoring with the level that the hundred hundre that bean kept as low as orational concernience would be muit to because your querations.

"heatpart of their contenation that will chiefl concerns in is the mechanical a mathematical tole which is fall as much develbed among their professionals as among one own, and from the as the low & materials I nature ere much the same theroughout the Islan Agotom, their inventions bear are to a considerally extent parallel to our orch though different in delacte but their alties are altogether of another kind their consciences who those by which we are moved. They are far more alien to us than the Chinese athet is saying hid a little. Into these intersection to live bear and enter how for it does not for they have no direct bearing on the work between (Her follows prot los are able with much pleasure to announce that all the harts of the purpeture are considered. They are touther being b targraph lunt the Bellowa, Souzette router ever reason to believe hutter new telescope will at least fuller explain to some extent ruceed in some explaining woedigating much more thorough thear lear butterto been

Consequently each word of 2 letter occupies 10 % seconds; each of 3 letters occupies 15 seas; and 14, 19 2 , and land of 24 The sentences voor steach in tenth a comment duration is they neverly contrible of five or six words, or else they occupy nearly the whole

the lengerness of the habiter to hear of retally obtained by
the new telescopy entires the descent our postiminary a
be without the account of what their been their for ascertained
with certainly and what little has been infersed as to these
nestice a meaning In the first place they are anguestimenty offerted by no chance make les reatouable beings aut not le chance action. Were are 3 au out, 3 vasietes of start of white my brefiles are reflectively of short, mediung orflore duration lasting respectively 1 = 3 a 5 tecens, These an formed with wheat much be called worth of 2 3 L a 5 letters lach, the face between South letter being 1/2 known & that between two consisting took by 3 less between two consisting tooks by 3 less a later of the last between two consisting tooks by 3 less a later of the last by the last between two consisting tooks by 3 less a last between two consisting tooks by 5 less and between two consisting to the last between two consisting to the last between two consisting to the last between two consistences to the last by the last by the last between two consistences to the last between two consistences to the last between two consistences to be a last by the last between two consistences to be a last by the last between two consistences to be a last by the last between two consistences to be a last by the last between two consistences to be a last by the last works by 3 feents. Their walences are formed reparaled & practes of Steener or more Latt, a group of sentences make the nightly message which lasts about on hour. It is a semastrable thank The russages differ in tuccession mights and for the most fast but ! form a cycle. Some the message certains never bat it is premature to to whether all do. he records of what has been observed about at as are not to tout worth, as it deterable; deferent plans have been troed with varyy incess, now known a nearly apparatus her bean constructed which works quet satisfactoris visions a duflicate color a cylinder covered with two sheets of paper with carbonised paper interpred revolves & clock work on a screw factoris to that a penul pressed Heatit on it would leave a continuous spiral trace. The heacit is horses mounted on a form, so that when the fings elessed thress us much in left. the observed his merely to apply his frages whenever or for to low as he sees a flash a the result is a perfect record in the language of dot dash a line. Sweet the following furtionable who interfrolation of a few the guestim covies what dog to all rulan? Wir a curiory fact that the longest continuous rulesayes court almost obothy of words To letters. Here are some 15% on 200 of these in a sente medage forming one continuous realistic to how there are \$27 pour the barrieties of in oord formed of 12 tetter) the various changes that can be made of the three letters dob, dash in livile long an these 27 highest to large used to the exclusion fall others? As fairly there is No reflection as get inggested itself. A fairly clue has presented a heading of two words. The ford of there is always the same; it governs of four letters; the first word in differest in successive messages mysellatic alivery cortists of two letters. Where vers there a time of the words

So far as they have been recorded anorderly series of permutations, follows in which the ruissis observations are tupplied & inaqualise and ere for distinction take prested in Italia letters It certains looks as though they stood for numerals and that the heading thould be read as first message thecount message their message is the true the accidental absente of a very unifer feel, regard the news available of the first message may mean have be the reast the caute why as before decipherment of the rest is most passable. The the due course of the cycle the first message will be appeared in a few days with the cycle the first message will be appeared in a few days in the cycle the first message will be appeared in a few days in the cycle the first message will be absented in a few days in the cycle the first message will be absented in a few days in the cycle the first message will be a special to the cycle the first message with the action of the cycle the first message will be a special to the cycle the first message with the action of the cycle. aa ab, ac, ba, be, bd, ca coded aa, ab, ac ba Conflete decipherment of the Message I from the Earth We was mentioned in my last letter that the imperfections in the Record of what was sufficient by the meaning of the simple was applied the meaning of the simple was a transfer the reason who the meaning of the simple supplied to the measure has again been sent a accounted observed a recorded to the measure is sent non thoroughly ascertained any over appealance in the possession of memorials than different world used to the Farth people. I me which the having of the measure of the passes of the measure of the passes of the measure of the measure of the measure of the manerals are thereof and the usual to me which the names of the numerals are defined and the utual are fixed. They hete misgroup that may remain about the brace wite fixed and fact the brace wite fixed certains to cleared Suppore a person fint to male one that, then after a pance to make two flates, then three, & so on; there could be little doubt that he was anthoughtdowing the numerals in their natural order of 1 2 3k this with a little varialism form the beginning of the ford message as follows except that without of purply the eye too much with dots and darkers . the - in the middle of sach entiry stands we may premue for "equal to" and the lad board for the humerd. Their begenuntless is turned into certainly by the next set of bealence. Here he will a first for the pretuned word or

plerace of fruited in talias withing brackers. Ween the word aplerace in established it will be prented in ordinar type within bracket, the second growth of sectioner is of their form a new word of hilelling whited is interpreted as plus made it offerman in their 1) Velus [1] (egadte) (2); (2) plus (3) (equal to 5); x to in for Leatences. There can hors be red doubt at 1 the correctness of the interpretostation certainly none remains after the third goods 1 (2) (minus) (1) (equal le) (1) (4 premis) (1) (equal 6) 3, & ...

Fo the numerals 1 to 9 and the tight "equal" "files" x "regimes "multiple have been established by some 30, minutes of sightly who sight the same of the same process explains multiplication x diaston twice the same horse twice 4 20, there 3 = 9. Sixulas (the same from the same twice 4 20, there 3 = 9. Sixulas (Then far the grammerals It of have alone been used. The hed story southeries restored the Agaleia of numeration indefinited, by the the work have method of allowing holation familiar to as with the exception that the it is decimal and not octossimil. The oclessional is common to all communities of their folk; doubtless because we have I limbe to all communities of their folk; doubtless because we have I finds womber all told the our b limbs a Laulennie, duodecimal to in view of the great trouble of that is lunirously bad the decimal Agreea of rotation is lunirously bad the number 10 being divisible out by 2 a by 5 wherear 12 in tribble by 2 3 h bullo. It is not to be replied that the Earth folks really ise (fallers own purposes such an absent agreeal but that they have translated their notation into it on account I the convenience of the nine variations of the in words of 2 letters It seems certain that their own tystem cannot be octavinal like ours, otherwise the wine variations world have exactly that the earth folk may be developed vertebrates worth five changes to said from the four the start fact but it is a water of time to devel in the fourth of the start but it is a water of time to devel in the fourtes he sealences in question are there 2 25 to 1002-20 10 × 10 = 100 , 100 × 10 = 1000 (tc) the word interpreted as " be" is thereing a tuccession of 5 dols; the interpreted will be confirmed lined. The concluding growth of tentences Explains the decimal fourt), somewhat of approximately and confirmed to be the tentences of approximately and confirmed to be the tentences.

187V Lecond E/12-9 = 45 45 x 3 for dots a whereonly 135 for numerals 13.5 54 9×10/2 94.5 for pancer effer = x names g x 2 x 1/2 1 plus 1 1 = [2] 10/2,20,10/2 6, 10/2, 3 5723 65×6 = menuter Names 1 numerals 5.5 thy sentine la additu 6.5 Six for 0 y 10 2 100 km 10.0 decimal front 10:0 51.5 add the letras a leading

as 7 (deoided by) 2 = 3.5; 7 divided (3 = 2.3333 ()=) = 2 3 (affroximatel) 5 (divided by) 4 = 1.25 a fruit tenterce defines tyrubols to half to 1 2 3 they such and her conclude the first message which are they and they are they be and the first message which are they are the area of the area o Their concluder the first message which occupies a little left than I have in it delevers, and It is oborous that if we in mars were in position to flash back replies to the earth, the foundation i laid to an amount of algebraic intercommunication, but let it not be supposed for a moment that the Earth can talk the south about a settlemetic & algebra there is much much coming to hope to make a farther communication very shortly when some ? add (to power of) Decipherment of the Ascard mefron from the Carth. In this message certain names are established to farther the name of the Sunk principal plants namely Son Venus Easth Mars Jupiter & Salura ha method that roug astronomer would quickly discover I their relative wear di tances from the saw, (their diameters) wither times of revolution round the same and the tirul of revolution round their several axes) are familiar date, as well as much size but the Earth light are only concerned with these. They are as follower (diameter 1) (Sun) & 7; its diameter (Wenus) & 7; its diameter of (Sarth) 1 diameter of (Satura) 1 diameter of (Satura) their regionce of numbers is tofficient to establish the words in bracket by the name of the planets again appear in securior sealences referry their mean distances from san, all in teams of the sarth disqueles as a unit. Der our astronomen of course know the batter of their in our own measures, so a want of leath is Established believed us and the South. Sunterly as regards the lever of revolution rosed the san the Dealineer run thus (Sun) (ruean distance from 1) (Vours); (Sun) (mean distance from 1) (mars) & Suntar sealonces as Sunday scalence give a west of time in terms of one rotation I the Easth would do axes their (Sun) (true frotaten round taxis) 25. Denns (time frotates four itiaxis).

f.881 5 planets . 3 data = 15 sentences of 2 to be the like of the 12 gon for the area if the 12 gos is 4 hours as great as it entered a nearly the same as the 24 gas 8x1/2= 12 140

This good of besteach occupies 24 minutes

occupies left they 25 minules The next grown in the second message is comparation uninteresty in itself but is a rucessur step towards then Extraordinar information that we shall know the description with next letter & which is not get faits deciphered medicing long despatets in eigher requires time twent out a perities and of the data we are now theating of are the manes of regular the words " area f" (radius f) the first seatonce shows the well known relation of the circumference of a circle to it diameter common between the wind of a circle to it diameter common without the control of (areaffeite month town = Therer (area of) circle) (circumference of) = 2117 = 0.433 hz 140 fee (area of Equare (circumference of) = 35 = 1.000 = 1.720 34.828 7 till Sodechard Consideration of 6.181 7.694 11.196 45 60 about (6 x tan 82°, 30 The need of the say that the tidy of the figures en a Sach case taken as units the terit of much otherwise if the sale by s the about figures have to be multiplied by & 2. Hencefif the one fill sale the sale by the sale of the sale of

				f83v		
	0		0*			
)-			1*			
/_	- 30		2 [*]			
1	60		4*			
1		A Shirt				
_(.	90		6*	10 22	-12	
	8					
lateral > _ · · ·	9 120		8*			
(-		13.0				
	150		10			
-/		_				
_	180	٠.	12			
7		-				
	1 210		14			
1 abject > -	(16)					
,	14 240		16			
4	7					
. +	270		18			
1.				10.5	7.5	
4	300		.20	30	45	
4	2008		-	10-13	825	
-1	7 330 2	3 -	22			
1 about > -	8 2 2	409	_23)	13.5		
,	. 36000	slop .		99		
		-			5 = 2 134	
			27	16.5		
			300	16 615 = 3	46.5	
			24			
	24 × (366, was)		430.5	number		
	(24 × 15° = 360)				:10,5	
	18 215 = 120)				46,5	
	6 x15= = 90)	9 = 1 = (13.5)			13.5	
	14×15 =60)				40.5	
21, 6	(3 × 15 = 45)	Sx12 = (7.5)	82.5		22.5	
				16 mm	113 · 5 ce	c
a of (390n)	(3 17 4 8 m) (1 5	15-502) SE)				
4	5 2	The The S		- 12 m		
				28.	13.5	Aug 30

Secripherment of the third message

contrived as it may beam the Earth folk have actually contrived a plan of sensing drawings the standing their sensitions in mercan contains the stement, of the art which is practical, in mercan the stement, of the art which is practical, in the 4th of argument ones. On excellent drawing & Salwin with it ring. 3, It is to these drawings that the long tententer contittes & at of words of 3 tellers. There are 27 different combination by of the letters but of there the first 24 are alone used the The 24 are used to represent times, parallel and equal to there of a regular polygen of 24 tides, or let us tay structures in Sentroidery, when farallel to those sides the product of these lines deads to the 24th part of a concle that which are of course indened by the construction when the first lone to the first line which are of course indened by the construction of \$24 part of a concle that is of 150 to the first lone. Then may be sufficient to represent a stitch in the North the next white — is derected to the Saet file of North, a do on what we come to the 23" site which is — in derected to the Saet file of North, a do on , until we come to the 23 side which is Often whod the cycle recommences at the 24th or the 0th will, whichever we please to call it a which is as already baid. the rumber 24 has unquestionable been selected & the Earth folk in account of its divitability by many different factors, namely by 2 3 4 682 12 " whereas 27 is divitable only by 3 and 9! a world not admit of the expression of some with a confinite of the english delicate enough to ordinar purposes bal occationally a decimals to be solved divides the angular into the factor of a decimals to be solved of a pain the stitcher to the state may when desired be seeded to thirds, one smaller, one half a three western of the stitcher to the solved on the surface of the state of the stitcher to the state of the one half, or three quarters of their leather of things their is consomical other of the 3 outled symbols. This is occasionally needed when the contour of the drawing taler a shade quick and expressions turn and too quick to be expressed by stitcher of the ordany length as those ased on the red of the Manory The method by which then is Explained in the tognables 24-gon & to in of the 22 of site then follows (\$2.900) ... _____ ... A to on after ...

then (8 gm) (6 gm) (4-gen) x (3-gon) all in the same way. After their varieties are given of the (3-gos) a few of the (4-gos) fewer Here follows & Satura from 123 . _ 38 minutes letters a all (qualk complete signal)

f 300 5 0.698970 9778151 360 52 + " tee 1.22 5 to 0 = 3 19/2/6(11 $5m\theta = \frac{3}{5}$ 36 50 - 903 290 26 52 differe 198 25-18:190: 2:120" - 2= 216 - 11 Acc"

1 tate the matter of court 40 mercage The ste of decimals in the rhumbs is skewn by specimon triangles in which the sides their a triangle where Lides ene 3 4 a 5 units of lentet respectively has angles of 36. 52, 11 and 53, 7, 49 (rease with bryger latter) and is tignalled 3.00, 56. 1), 15 + 50 the shumbs are 0, 5490+53.7), 4(270°) 0 0 5 x 9 5 4 x 18* the employment of the books quarters halver there que deis regular symbols) Example Solar typhem at the time of transmitten. "distance to" expressed & brackets endoing the Listance a singvam of tome sample apparatus Subrequents 4,5 h - 1943) vory a series of ferotures, Each taking dis turn after repeating the 3 primar over so that the complete cipelle occupies 4 n nersages. Poer 4th day a new one, in 28 days of fidures

may 20/97 in-ferred alt both t Tione aug 100 1002 100, 50 100 30 100 25 319.5 10 19.7 2/2 19.5 5 10 2 7.5 3.7 15 + remanider 40 is due to 4 grand percent or 10/6- Early interred Pa both w allw 0 pt 56 31 18 relidue all I this due to 4 grand parents 4% 1- Ead 78 Calc percent 90 84 50 + 40 = 90 119 3/10 50+30+4 = 84 26 sho of obs no Care 119 8 50+20+8=78 22 26 2+ 2W calq is of t 107 100 106 24 obs ... 24 101 = 65 Colo hercenti 53 25+40 65 30 1+1W 4t 16 150 261000 60 25 + 30 + 4 = 59 36 1W 5 25+ 10+8 = 53 Calc n-4 t 24 93 32 no case zt zw 25-+ 10+12 = 47 0/13 11 36 1 + 3W 20 40 25 + 1/ = 31 6 20 clase 28 140 Calc her cons ot 200 4t 0440 to 34 22 40 201000 18 = 34 ry. Code norGode 31 1W 0+30 + 4 5 = 20 Calcanot zt 2w 0+20 +8 16 3W 0+10 +12 = 22 0/13 11 11 01-4W 040+17 = 17

p. 92r May 20/97 PaP ell T 100, 3000 140 180 164 +304 MT > 40 2/2 16 10 20 5 4c P, a P2 all 100 100 TOO 1255 in house w breed 13 36 30 € 15 3/4 te Parenti diciled 4 2t , 1t 79% 7.7 3W 24 193 194 195 196% 12.2 3 49 21/2 100 39 10 19.5 3.7 90 15 39 1/2 24 70 60 7 3.8 56% 28 14 56 7-7 50 31 15.5 40 583 2.2 18 0.6 30 564 1.2 2.5 10 565 0.6 0.3 1.2 2.5 566 % @ calculation of per certi 0.2 0.3 3 * observed per coch see p 17 of mottled blue quarto

f. 92 v Contributions & Pa from P and from his inferred progenitors as well Saturn 11the leverage proportion of Frein the hountage of a Trophound is by observe t = 79 (2 He contentration & P from an Florentage P = 1/2m Premare = 1/22mm (3) thout of each furry in soc. sund interred a/1-81 1/200 Ph Ps & a amounted In the they remetric Series: 1-1 0.1.0 for t3 with information with in stages 0.5t 0.5xt .33-7 0.53 t2 0.53 x t3 View contrato -.33 .33 -0.5 et is the lit 2 persons to 16.5 from Each .83 amount of I'm the known ancestrace .50 in the inferred o.sxt o.sxt 0.53 t + 0.54 t2 + k Contribute .163 .16 =0.099 = 395 1 of this, 25+16 = . 41 is one the 4 herrow in Pon . 10 6 rock 1.0 500 1.0 1.250 1125 0.54t 0.5 t=10 0.5xt Sec 1800 956 of theiles + 81 in few At the 8 persons in P. of 02024 & Sad , 649 their propoder of Tricology in tage ,50 . 25 1-2 V3 .50 0.53xV .54xV2 15 V ,070 of wh. . 10 in fine to the 4 wier parel = . 025 I Sail .10 .40 :55 UZ .035 .280 72 05 the . 05 is due to the 8 W. graffers or . 006 t seed

h's, '79 by + (.79)2 P1 1.93r Contrib : 79 x 23+ (79/2 24 -: (79 x 23) { 1+(79) 2 + (79) 2 + (79) 2 + (79) = 19 8 1 + 2-(-79) 3 = 0.09878 1.21 3 = 0.0987 × 1.65 = .000,80g = D= 0.162855 h" - 56 P' + (5-6) 2 P' - 2 16,3% ·56 x \$ { 1 + 156 + (56) 2 + - } = .07 \ 7-.28 } = .07 (-72 } = .07 x 1.39 029.7%

Personal Coeff to Earth.

Personal Personal Nersonal O. 2500 Tric Parent 0.2500

Grand par 0.0625 grand par 0.0625 f.03 v 0.0625 grand par 0.0625 9-gr par 0.0156 0.0408 accelerated 0.0122 7.9.91 per 0.0102 grand for ancestral Sach T. Evens/ N ... N. " " 0.0061

Catalogue Senden and Subjects X.



flv

A

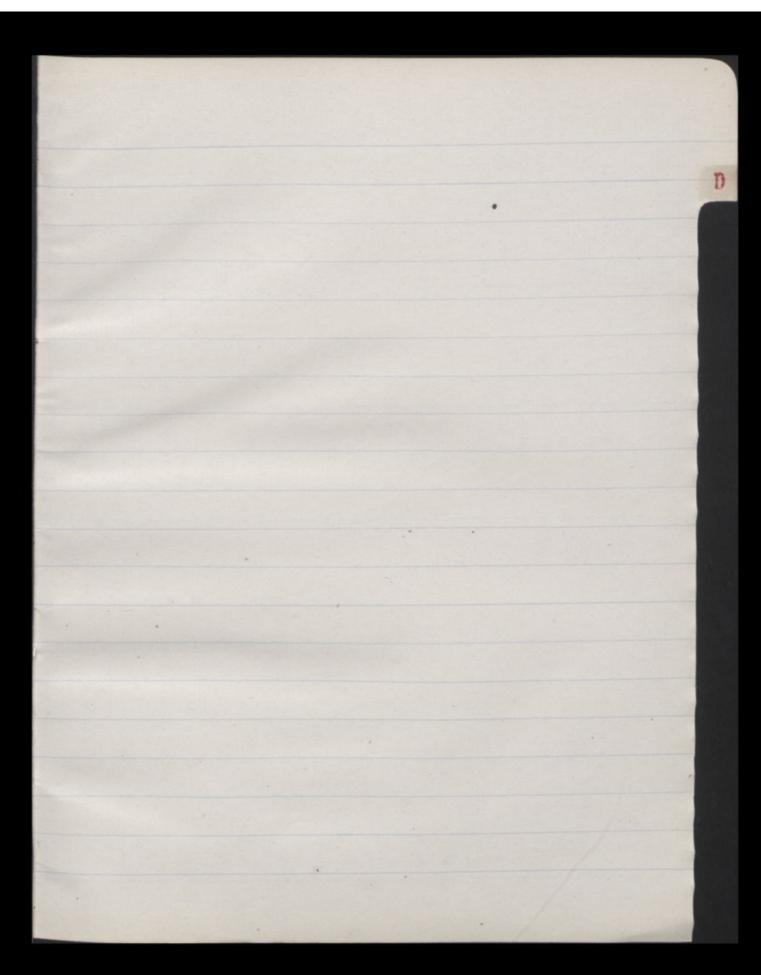
S. B. Bexesford T. b. Cambridge Road Seven is Epop

Victor Bran ford, North Ballackelish Inocurestinis Isulang 25 2 andeland has left now)

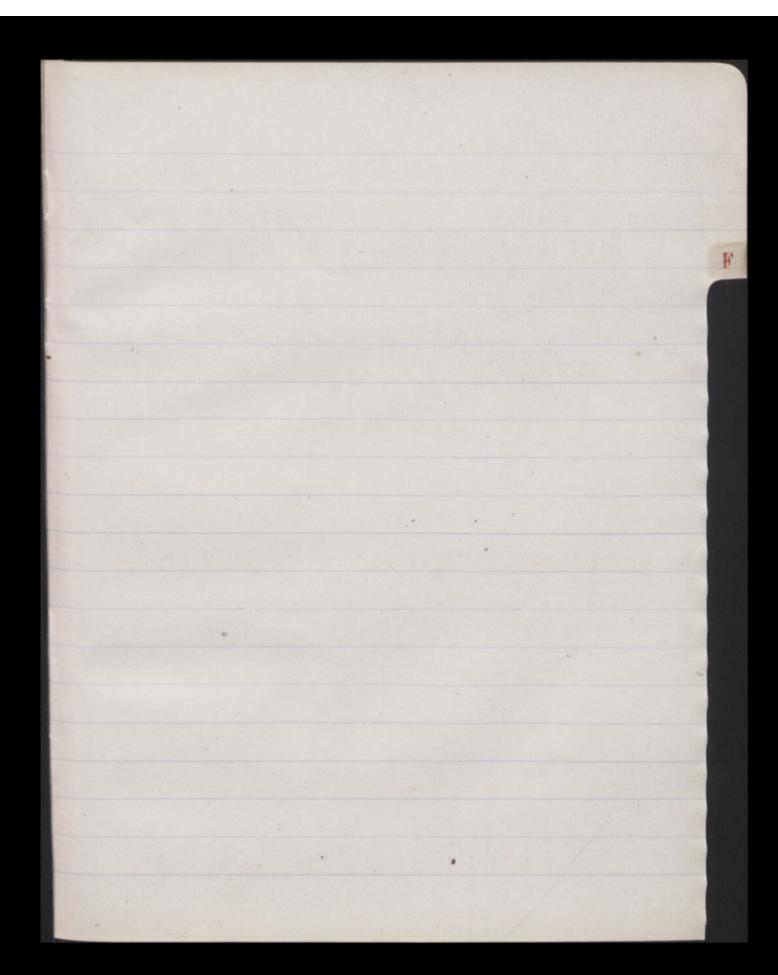
Burton Neife (Richarda) Fox. Warren. (By fleet) Surrey

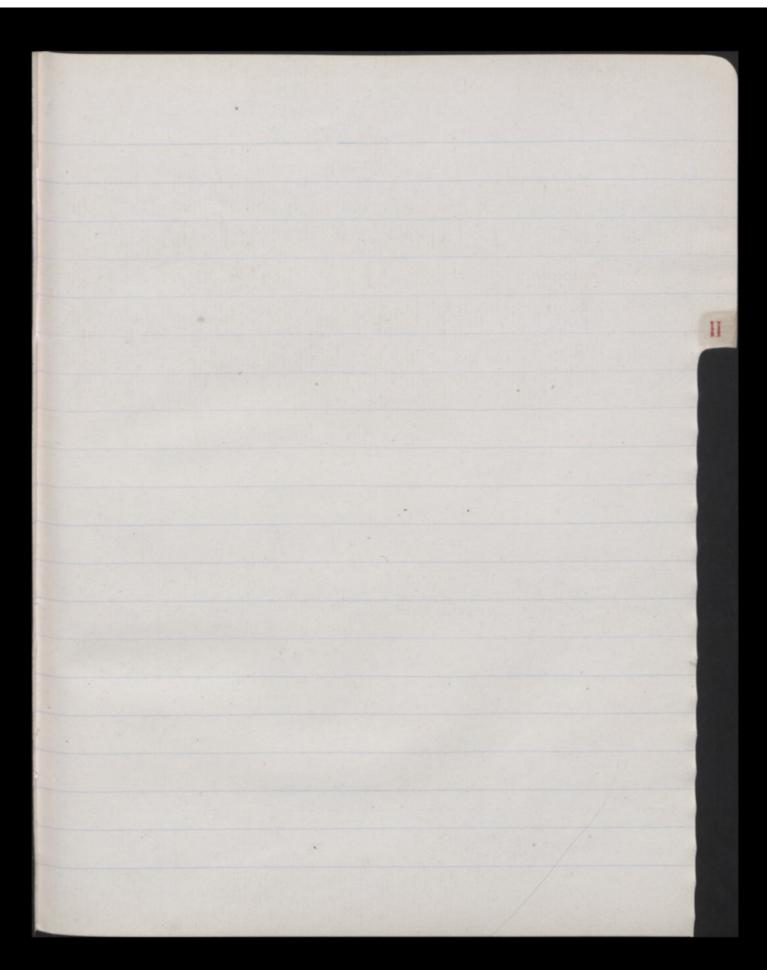
F. H. Collies, Church feel Rds bartin Born: aug 25 2 Circs

J. R. H. Crowle MD. vitroduced & B. Sickholl as a likely writer sent him a Circ: Rug 30. asked of he de messertay was in which I could ealest him helf.



Minted O. K.V. Simplemen & as litely writers also any 30 8? A. E. Poster St. Richlards 28 Botting broke Road West Klindington any 30. I asket him a circular





Lovelace Counters M. Och lan Park Surrey

1

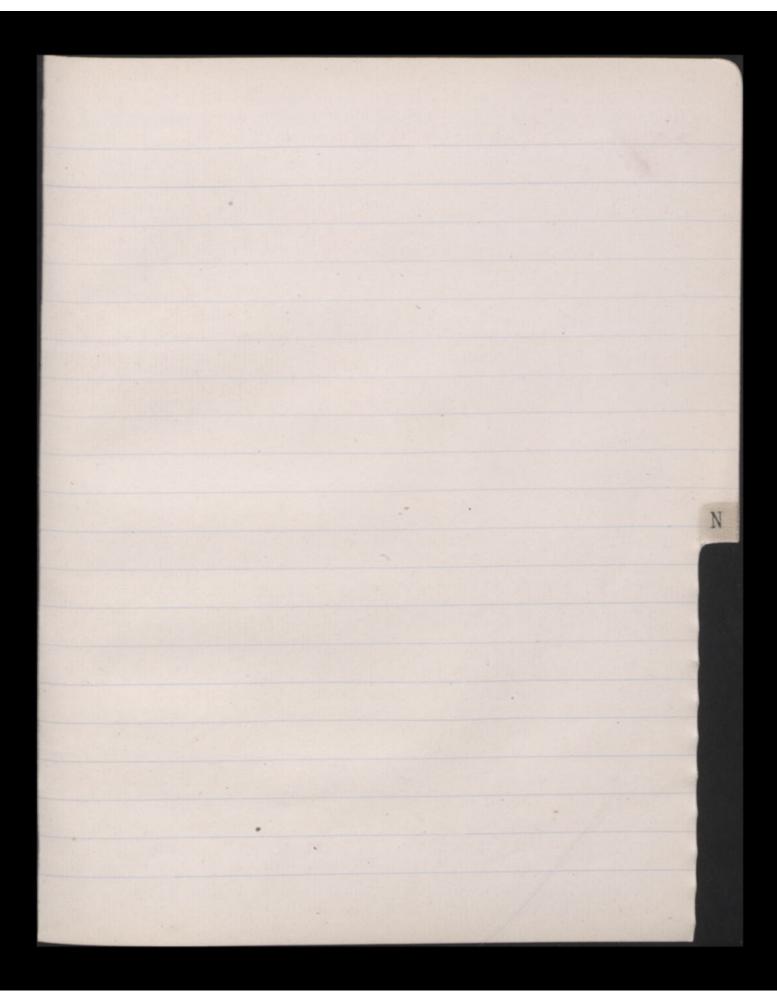
Traderale, of X f3tv Senders June 30/1905 Mor West 1. Miloesta Terrac Leanington (Lyford) Shuck burgh

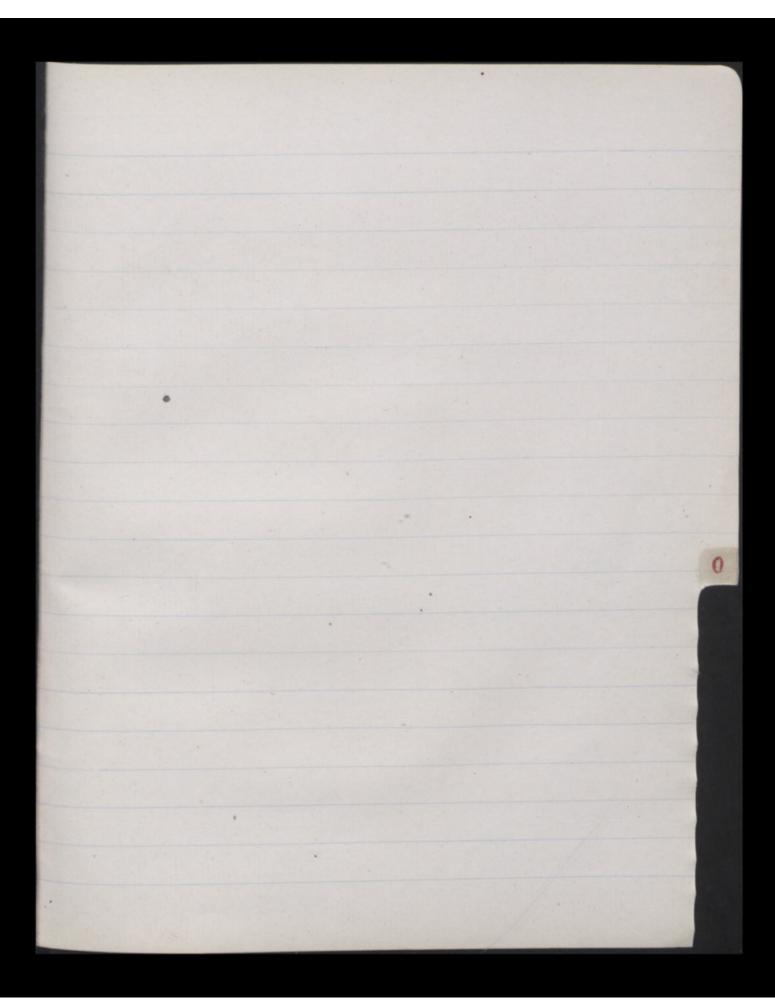
Subject. X.

f38

arther hearby, Pyrford. Surrey. [W. Litelfield - I called)

M





Karl Pearson I real 2 Cores ag 25 to The Galler, East Usley, Berks

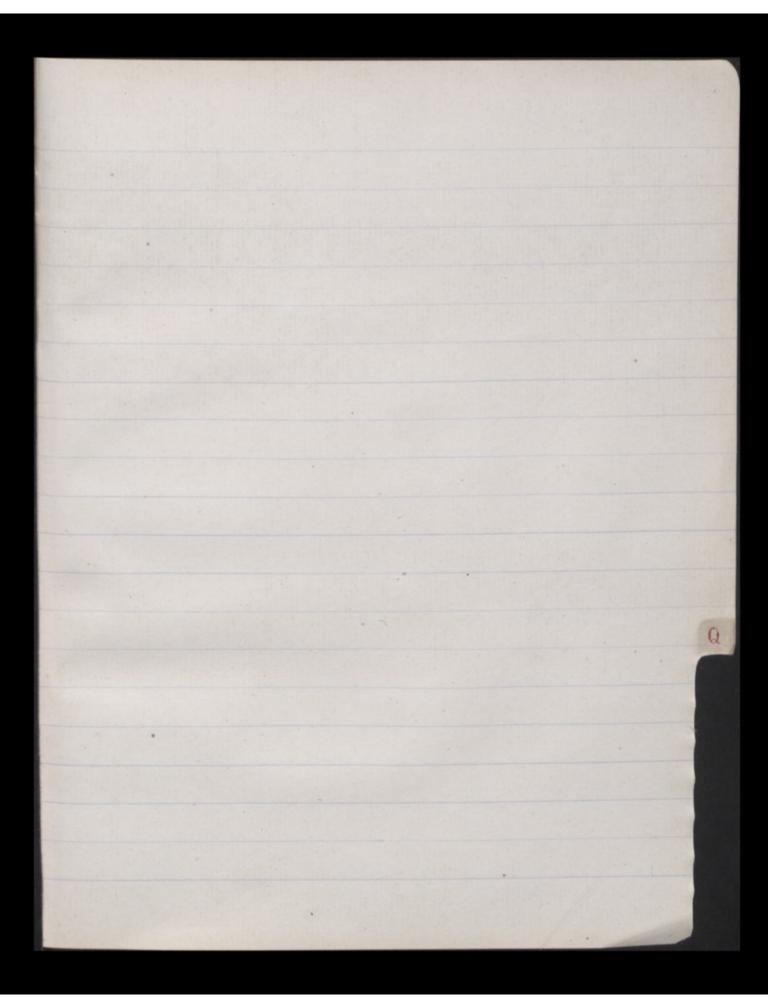
Laidy Pelly. Isul aug 25, too Cores

Willips John, Bowlon, Shrivasham, Beerles.

F.S. Pode Jesus College Cambridge; I core leng 25.

D. Porter(introduced & J-Rickholl as a likely writer) 3 Hollis Lane Hearingley Leeds ong 30. I southin 1. core:

P





Mush Russell (Lushingtons) Hatch ford & Coloham letter, With people a Cire Mom

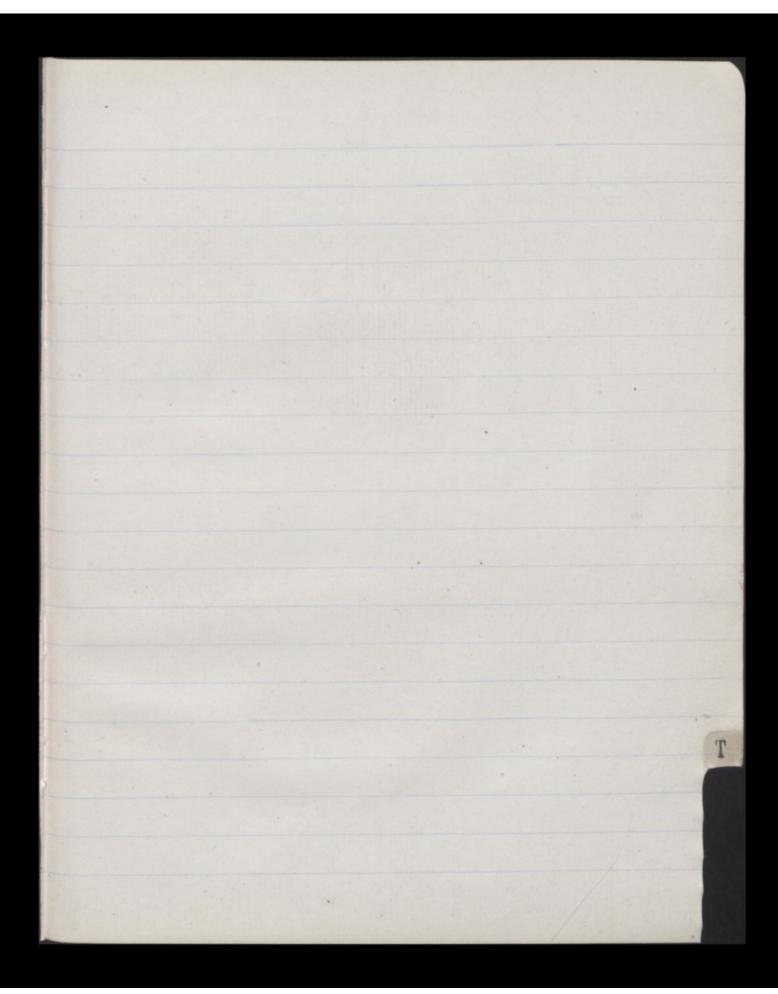
R

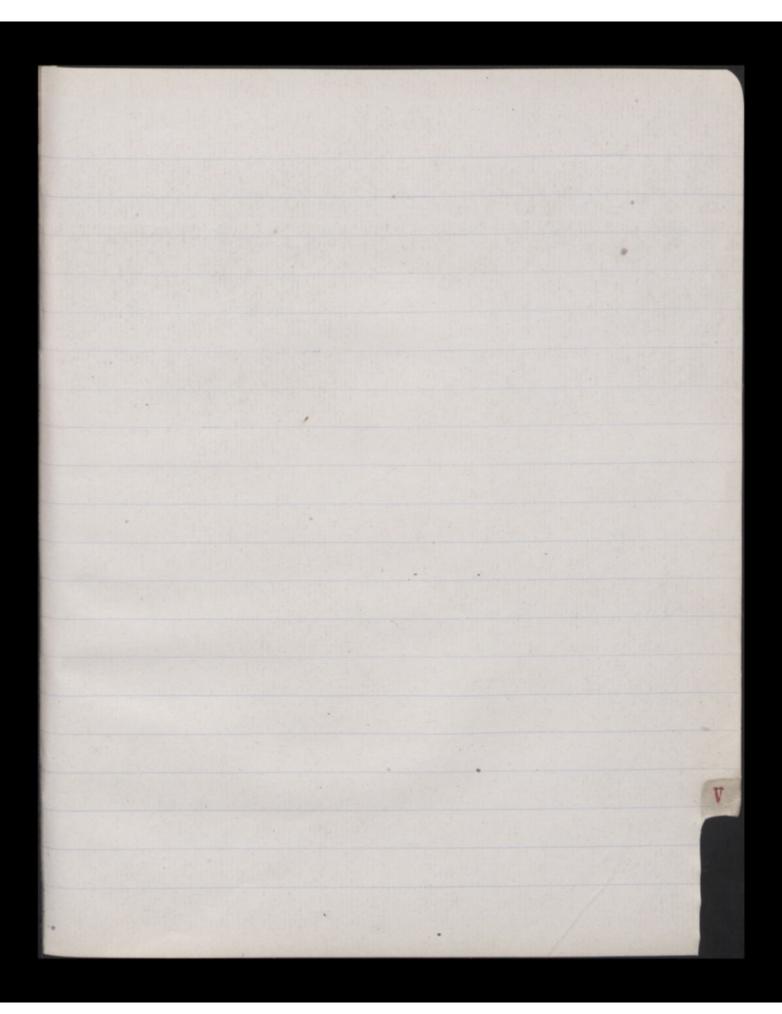
Tratom of Subject X ... Seet. by ford
June 20. (Ly ford) Shackbargh ... Mrs. mortheth

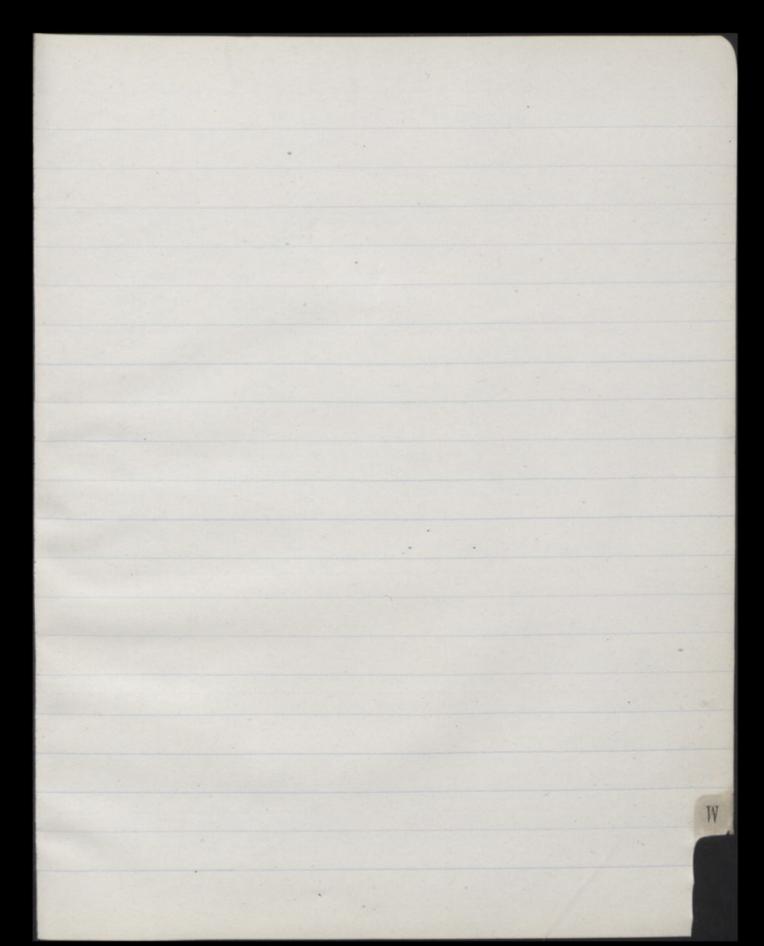
PrinSchutes Pant aug 25- 2 copies of Coi: Lawret return) & 110 Barbay Mond Oxford

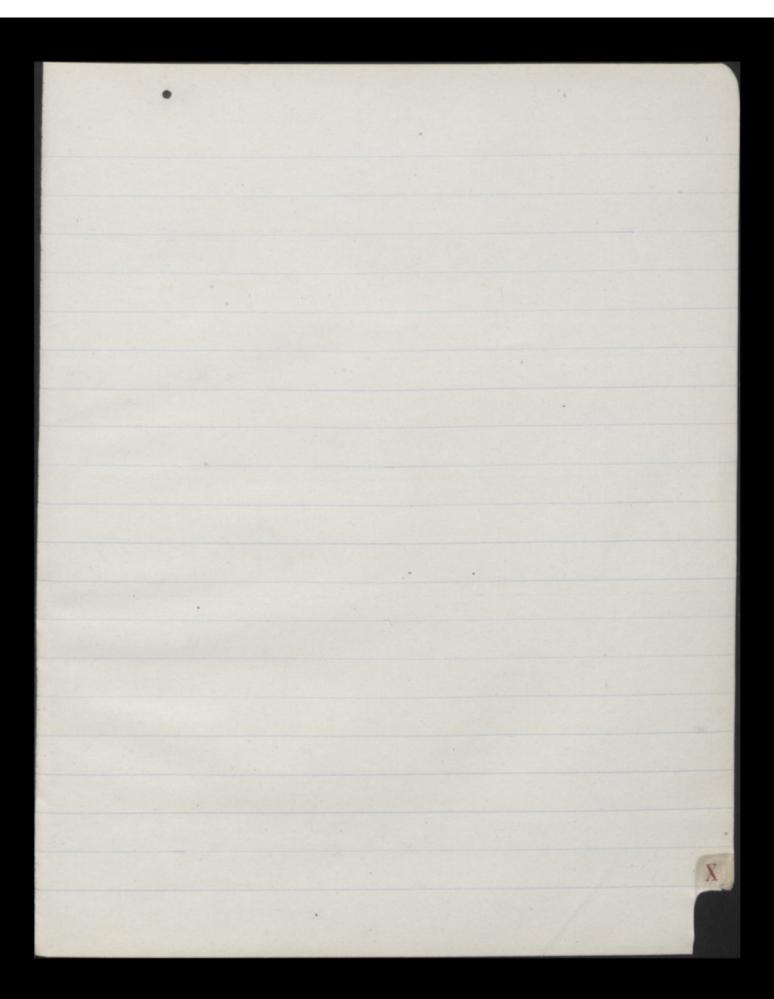
O. L. V. Sunpkerson The Vicarage Egustors, Kar. Ital 2 copies Dag 25 Jeine.

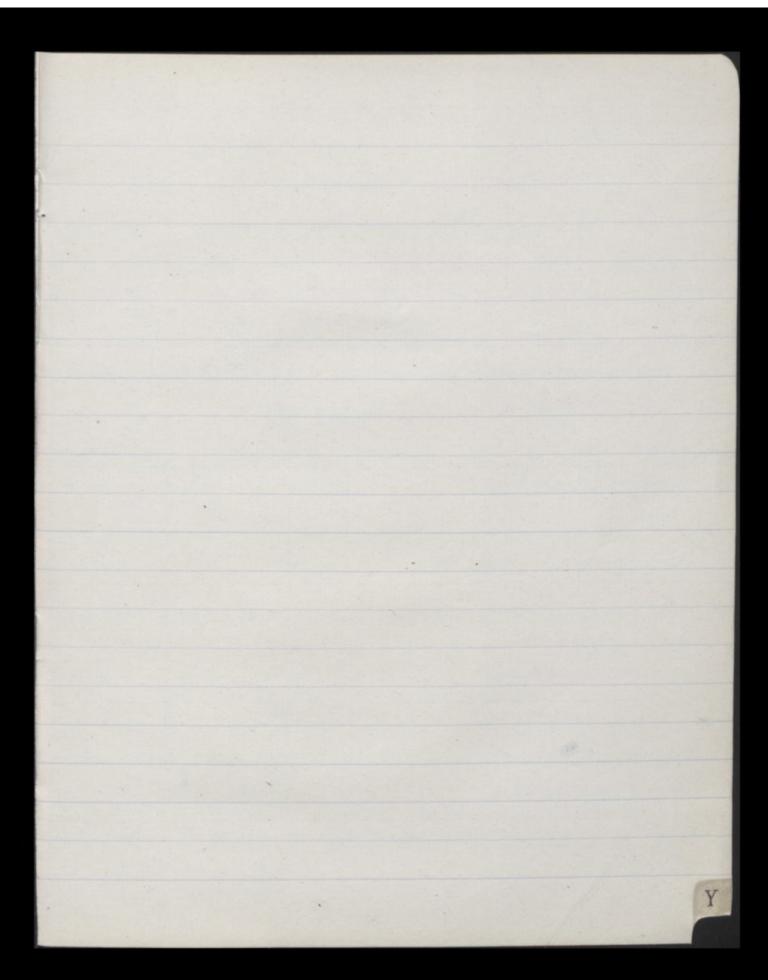
Mr. Cerchobald & meth Stoke leigh Way bridge Geolles Sip 14) I care

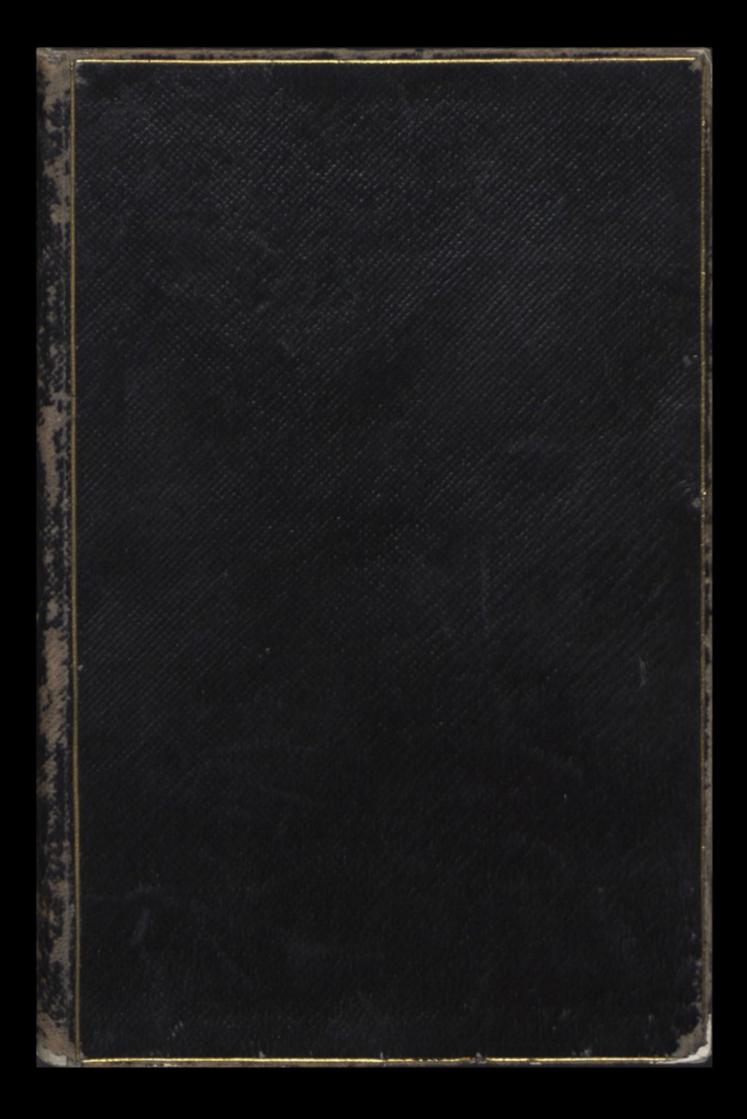




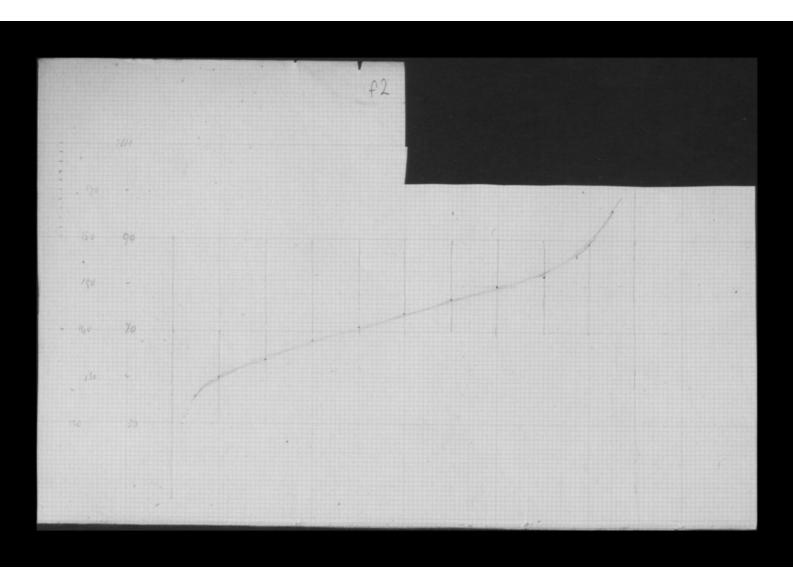








flv 18/ 20 出一個 . 40



EARLY AND LATE FEMALE MARRIAGE IN VARIOUS COUNTRIES.

IN VARIOUS	COUNTRIES.		
Proportions of early medium and late marriages in each of 22 European countries and 4 N. Amer: States	Percentage of females in each of the undermentoned countries, who were under 20 years of age at the time of marriage		
100	Country	Per-Cent	
and wind attund	Wurtemburg, Baden, Sweden, Benmark, Belgium, Bavaria.		
late marying shader	Alsace - Lorraine, Norway, Switzerland, Prussia, Saxony, Thuringia.	8-11.	
16 A	Scotland, Iveland, England and Wales, Finland.	13-15.	
3,	Italy, austria.	17,18.	
40-20 years and was 3-60	France.	21.	
no ors	Hungary - Croatia and Slavonia:	36.	
40-204-60	Croatia and Slavonia.	47.	
	Rufsia in Europe:	58.	
20- 1 -80			
o line il loo			

#3v

Wurtenburg Baden Bavaria Belgium Sweden Bennank

2 - Lorraine Therrigia Brussia Saxony Noterny

3 Exelan, Firland

-4 Connection Massachussells

-5 France stoud

. 6 Hungary

.7 Creation and Thorne

-8 Aussi in Curite

Proportions of EXELA. LATE EFAIR

Usalembara Backer

France

Jestin Maria

Shiring Colored

Mirror

Jestin Maria

Litel Anchor

France

Hungary

Crealia

Rafia

£5

- Vermont Rhode Ist?

· . France

. Tretand

- ge Bretain

- Italy

- Austriap Hungwiy

. german Empire

- Russia in Europe

100

no?

20

40

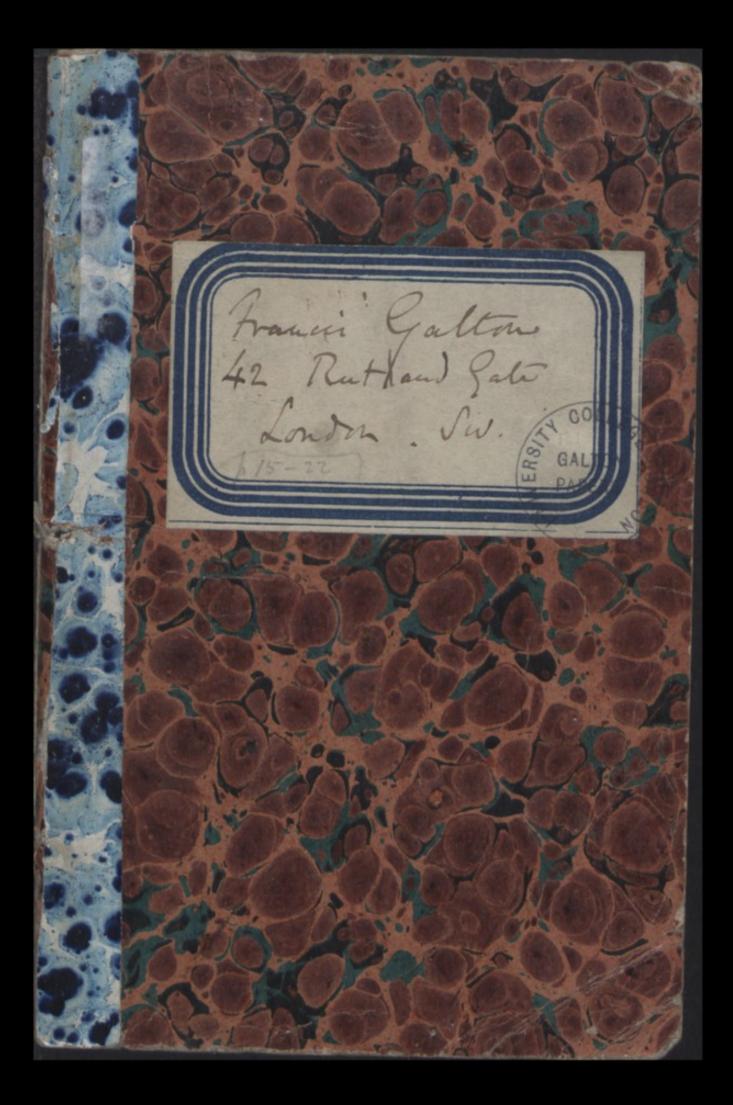
60

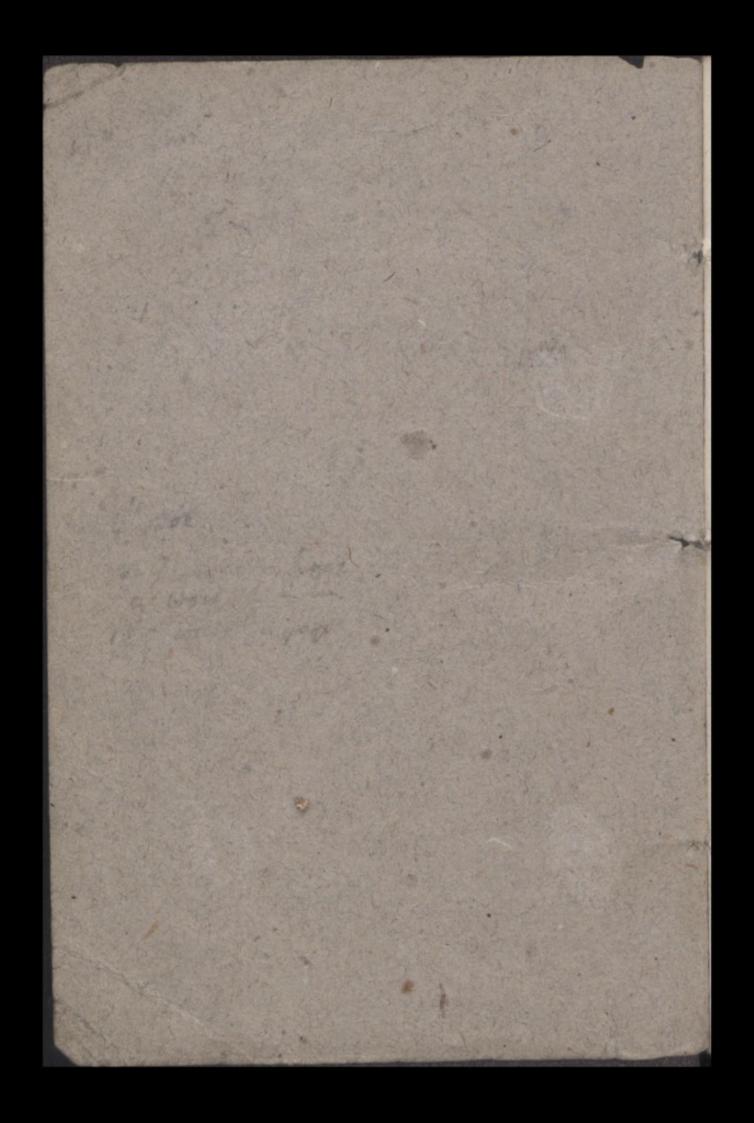
00

- MORMAL (VARIATION) COMPARTO WITH OBSERVED IN MALES

Faculty, Age we will Measures at the lower and where quarterly places in the class, whenever many mon of the specified status are classed in measure respect to the faculty in question.

f.8 9° 9° 2° 2° 18° 1° 30° 40° 1 68.21 172.4 all Franclated with a common unit of feath said that the inflacence the interest and the whole can be over a quartery places in taken = 2 In which is for own special unit





The travel of the eye worng Stances, eye 4 34 Not Since 10 = .0175 2 x sin 7 30 = 2610 or chord of 150 - /4 radia, 2 dri 7212 = 1253 x 2506 = Exactly 1/4 radius 2 ser 70.11 = 2x1250 = 2500 or chord of 14°,22° angle = 2 x man Sen angle 2 x su zangle = mearly 100 m 1 angle 05,22 0087 01.74 10.50 0175 03,50 1572 05.24 0262 form 2114 06.98 0349 26,16 08.42 0436 31,38 10.46 0523 36 60 12.20 0610 41.88 13.96 0698 47.10 0785 15.70 5-2.26 1742 1780 10 57.48 19.16 0958 11 62.70 20.90 1045 12 67192 22,64 1132 63 73.14 24.38 1219 14 26,10 15 1305

15 = 1/3 = .0625 6三十分=、405 flV Tx 2 sin 8° = p(100) p=1 dis8°= 13917 7 = 2. din 8 = p x 27834 2 tu 8° = . 27 834 recip. = 9.44457, log" = 35928 Togre 9-4447 log = 0.54775 7= 3.5920 6,2=0.30103 9.99232 2000 - 35928 = 04072 = nearly 62 x 16 so take the piece of paper a fold int it division Cat it shorter by big the paper a buttered that mader it equal to it should be 3:5928

Diffusion Rosate of the hours of attention >2 % blurred front 3 observed front a paper of length pris folded into 16 harts (1) what is the distance at which of much be held have the eye and squard tit, in order that is the subtend 160 12) what are the erross of sad direction 16 = 0.0625 exactly and land approximately sublends 10 longth of haper =1 with rod whose length is 3.5-928

A 1/16/1/1 (mobistion degrees) differs subtendo 0.0627 0.0625 0.0002 0.3134 0.3125 0.0009 0.5012 0.5000 6.00 12 1/400 of Lexighted h to 0.6263 0.6250 0.0013 0.93800.9375 0.0005 1.000 1000 0.0000

meatured with my circle sextant Inday Evra add 40" For a read 24.46 25.0" Ex shortly lampport 10.4 101 F# 10.39 10.380 FR 2034, 203430 FM 38 40, 35 4, 34.20 HK 26.0", 26.20", LM (RS (Gul of street, hours top to meanthadge of parenul also 5, 14 with windsows 12 22 Hoor 30

The Querang motions of the Right of Brandley Javen of expected to bottout of a final Expectant allulus as for a rabbit the ege late in fairly 500 but the plant trovels stonty Cabal it rather jurgling / resting say & we at End forther out when at an extreme one jumper the offerest extreme I Hunt It area is coroular 1 2 3 4 50 alt Nº bolon hand with keylen & remover Ned verble 7252 Dull day bal clear FG= 251/2 a bright number house dissappears at 14 0 TH: to door handle squilly bright but larger at soy 12 FK: FL= tooken for a n b. they wil catch me eye HK = girting best a faint building of and continued see a led fluttering flag at 129 becapt for misente scruling the door would is later in States and sent do so on the window - without states a from 3 as far as the eye can subdicable so far can the pical of allender follow as a country sattorierous, but the above before ta less minutes circumser to over of more great allerton 1 Well unter the eye

scale 1 % sapeter wide 11. 43.

Questing motions of the eye par f art of fooding dropped things with gree contitue of sight, contrast, light be bluce it area allended to well in view throughout (2) Travel the eye methodreall the a good day of punting a field chord of 16 half wides viewed at 32-31/4 = 28 /4 wides

tublends 16°

16 quishi with at 14 3 subtents 16 with

= 16-15 16 mides or 5.7 1/2 16:57= 1:36 = 27.8:100 For one degree: 0.0175 900 = 11/4:100 as calculates above. 0174 :1 The object watched she to a uniform support of It brecon area 23 in diameter that the erge should be able trust quietty on it In boling as doctant objects alleuten is not acompanied by a cented muchlar Effort in It ege ball that is felt when tooling al never one , feel it when the ans more the loo jurds of. In perfect repose district this are thank bligger

The travel of the eye engaged in inthection The typical of an inspecting ope The travel of the glance whole insheating The motions of the eye white is inspecting The Meeting of an wisperting eye Notions of the eye that inspects. Motions Jah eye in quest



The Patter of the inspecting eye fance 7-8 feel with Gen: Barrel W 0 teen now Landscape Com non feether la take british H. Reid from no delait foth H. David ziver beliver. bach hooly landerfu Lary hillen 70 Chelon ned very free - 4 foller . Vous / Houston Law Feen dos gon (3) There is no place delasto Hf Whehome = hard & follow Landrea very full 200 H. Criffen 1 figures departer Notice Cary Striple Low Heer 19 Suspens 2 Km

Ef & Sary & follow 19 Newbordy () the focat & firmeifed feznal mani fealusts neutrand the 161) weddig Gom & Troberti 150 Da daroguin Grenutz The lightest part first catalant ex thence I think the eye goes more ears of our than who are to the right rather than theft, Leading lines Some lecturers turn in preference to their word in additiony in another The Rye tracels less widely, + left altigettes over familia object there being norther new new the margin of views tattract it If something new he notes there is a solden show them a forest a rule 2 common faults in bothis to a dolffed thing to the first the french to chapter 12, and quarterns, dueller will thing the place of the place of the periods from though loose in briefles better than the place of the periods and the periods monther my trop beaute Continuously morning the sye is tedrous, sudden pances a change of direction are nestful - they are foosh starts. Even jumps are welcome The eye abhors continuous even motion

The core with it halo the core of the prebagant allerten f he blurred core 1 allation, Thispet. Mearled of lamp in a hoge - mist univors for injulyfuned typed Cor with some terminalist deffused Dashibules allente total of white it some contral core of tome depth , bull & the whole believes are in the one storate the can be the core, diffused shot blace abot, flire spot focus flair The diffused focus of attention = 2 Things con which the sharping streng 1. angular area of the of dire I focus Letter a where his within degree of defenses 2 horten of that from which allenten is fixed. 1) is larger than 2; in both respect, when the object are all distant file difithe fleding in what - = 000 Come dery it sign as a camera the range of follow destance of devilen from centre a what the circle of conferen does not exceed to a ke in trull The nearer the object, the smaller the angular worst because of the disender of Agreemy uniformed short perception the circle of efficient watch fulness williams mooning the eye

In a state of vated believe the newscler start lava la Explain an conscious strainer. That they are so is Jante broad 11, by the sendances of sharing movements (2) h the focussy ben a little different to what it is white the financles Three the affect the crystalline las have in that Care to act to the different! the Eyoball being a triffe squery orly shape Brown a brown-stick, swell with those, scretched inthe atten.

J. P. - notinen he - tail the distille (2) Cosmogene 11 Conscience 1) Consume hersentlish of When a fear of famating derrite munolality. - It lest transsering If it consequences for and loca percent as present, as the restore to object one w' more so wrong - age much retroblement - consequent rates bright r= fortend to havenly and parente biparental his official = \fraction forestal = \fraction \quadratal = \fraction \quadratal \quadrat Don アュー(1+(2) = アンマーナーナーン

Fechnical Word, repose reliring rest

10 I. Burnet. Comporter a Painting 1828 the moderateresty object with rust frament places as somple as possible. 17 Strong destinction between painting a foctor. He first explains tout at a glance; It second & a discustous route Macc 7452 2 mench motion 2.1

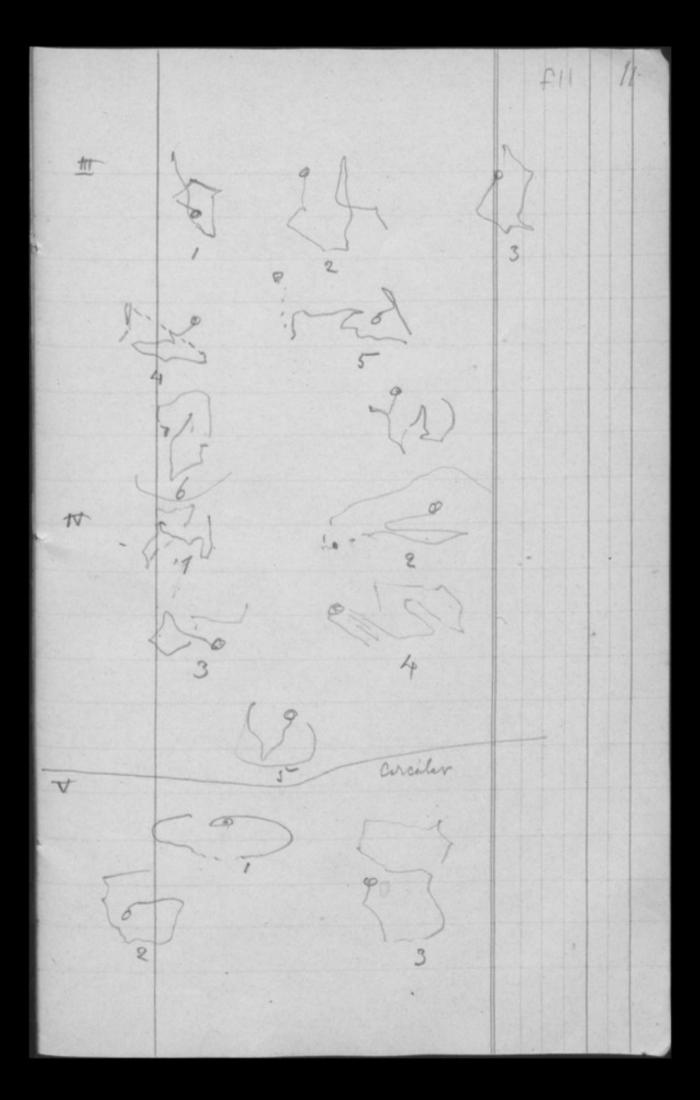


Plate £120 VII VIII 2

6 x 5 who helds 100 x 10 = 600 entries / 4 figures seel (15 vectory largoretters)

CIED XIII		F13r 13
right left vertical totals	35 cases.	
down 4 5 10 19	right, left, vertical down is living as brequent	one squally frequent
up 3 5 0 8 lead 5 3 milessile 8	down is levice as prequent	of frequent was
Titals 12 13 10 35	vertically down is the me over and o	rear once
J. Burner FRS on	portrait painty	850
1. 3/ Leteness y M be of from an other masses	the fame time assets	the imagination
"Ho estrane darks	and their Exact dittar	a tem Evel of
Where light with fall where the war hopfit to be soreal before and sive and	but in it sketol is often love	tresi a scendance
6. The porter should "not	of crois a feeble catalog	stoo untreesen
1 nowwell.		
That likeners does ne instant recognition of any where scarcely a feature	one of our trains even a	erors et terest,
Where scarcely a feature	e can li defined" (%	on as about
Mecoguntum astronechane machine that shall recogns with a clambe allumbly scheme by afficing a bey to a	scale Mure is possibility	gelt sefaret
a Not as wit up clumbe allumits scheme is afficing a key to a	at history out a posti whom multi liste of adjunct stirles.	
a key that fets lovely a as one of fets exacts a los	a bod with may bod charles few wards.	4 40 000
To fel a goeant many references is a 26 capitate 26 common ear some 12 freel	mall these are the many symbol of this	butter , my
65.72 1.8573 5.5719 373300		
823 mm = 3 figures show 6+1/000	er as same a grown by 3.	RESERVED SE

because I can word a larger area with one ey than with two. I have lost much power of as pettined Event distances of steels of steels, high clouds - Eye adjusting small de Blind shot - one eye must travel vine than two With one eye I can keep word on an erren 2 & hours I hearn able twatch a circle 40 in diameter. certainty 30, when are is bright. one gains in watching from to the 6 thing only one eye acuteness south in dimension some what in first (in lines)

16 Stal	tement	1 perce		freet 2a	cu	f14
				à descusse		
				and Culty		istlis
19 Entl	-	, wist	men of	4 force		
20 Presa	taltru	istic es	charte	to force	War	
21 Frest	steps	e de	1	garans, marke		
	develo					
DESCRIPTION AND A LOCAL			Sca	le in meilleur	eties	(3127)
Tabo	las p. 26	A. T.	Y	cofralisad 2 x 1:32	tu y'	2 y 2 y
VC 0	1,000	000	4×40	0.00	45.9	22.6 12.1
			The second second second			21.7 13.5
		3.00				
	0,852		100000000000000000000000000000000000000	5.28		19.2 12.0
		9.00		,		15.7 9.8
	Market Street Street	12.00	10-11-11-11			11.9 7.4
		15.00			16.6	ALC: BOXES
1.2	0.237	18.00	0.9.5	15.5	10.7	5,3 3.3
		21.00	A COLUMN TO A COLU		6.4	3,2 2-0
1-6	0.977	24.00	3,1	21.1	3.5	7.7 1.1
18	0.039	27.00	1.6	23.8	1.8	0.9 0.6
		30.00		26.4	0 0.8	0.4 0.3
PR=477	0-500	.7.15	20.0	6.29	22,6	
28E=954		14.30		12,58,27		

Filmet a unto their & Booth, schools incollect but madegnated good rose - postfine feet Went breedy con to dest faire worth various deals, all agree in Character Energy topply figure Consten 66 observe) bitoo was emerlined Incouragement lion atal har bea dre 4.4 Reasonable better. 33 Bosonwell Social and PE 2.3 25 > 16 32 ,312 1.5 0.9

present taces F15V Predmind & Italy - Military Softed welch Shiper tred physian Engloser of labour, their views Haverther men at niational feles Bodies of men at niational feles The write-men til Evel they had presed med exam Swife recruits, differences. we have not conserve and reproved since to cons Rejection of conscripts partly the to be wester Kryboys. Good faculties are generated German ruen (conscripts) nacer y a whole farethe Sandows Now Sup 1901 I deal of a high infrarid race

Statement of problem Roch healthy child a national asset a conversely present the just a little too low, In socialistic Inocess picked man Breed fin the better What heren't call of Nusture Tests of feitness & artituess tontines good inverticent for healthy way los loan with probability of repayment is a few years beller thevide risks atterelos combinalies Genfor more watchers & shelled certics

Conditions to be observed in discussing it antherfologest know. Social prejudicio must not be shocked estable wrong on 2012 Look for statistical results, with many with trad failures Brief span of life, much be costent to work for falurate must gions a feal its way No hardoness that will not only cruel and who reach on which reging the same markey fortilly

f18118 Disconsequents Selfahnel Trade amons. Lower effer enchantly outself & Herent ileads cult of weatness Smallusp of result with without Negregasion Carl breed somewises - only or higher hard of stock marten of Schools don't publich Halestice

Suffere purer desposes int wing need to action enough provide 2) that figures enthusiasa has been roused showords what notives have abready influenced our distens that care more to cente great - Enduring reforming a) is toward claps by in money oly Viscovery of the fallest a by factor is life, to by estimate withouter field the part book a recher would are foremost at it said best ship a crew would make the careful very an hote the familier Higgins to Success being de to lack . The brote tree of all' minter suffer talents a lack ? the brote tree dead' minter suffer the toler for always tope , but is practice a shortest laser where where it is a ladder for bottom to for wood and a ladder for bottom to for wood and a ladder for bottom to for wood and a ladder for bottom to the suffer of a ladder for bottom to for wood and a ladder for the suffer of a ladder for the suffer of the s Church. Brildes & schoolunder, latertice " batters Low Judges - his honours - legal appointment, leads to other their Stock bobles - capital course is bles - but may bear : t India lev: Service requisiont & appen quarter artisans i certain Selected trades - ? Por Toubley Domestic server, goadhare few but there they are medical perfection Thestrial art students science students (1) 30 many her thous: have such a tuch abolicie (a trustin) How for centil be extertained?

Enthusias experiences of its force Value to the nation of a child whose natural telestrase ut, to will of the fa nature entrued with higheret healt character intetlect energy } Hugerati Picked corps Soleter derka, foremen, statesmen House & cattle be Completion Success. For my narrow division between For contine the chief want is rulely hands who can to a normal days work. Immigrant . [support a barreall with tund to the total but only a few exists word considers secure an infurial race Blanty Weedings out & substitute such The present of life lange from £? oor a year to a mening sund, (Competition supposed equally started with capital)

5. 1. Paget medical students

requires a band of co-worless - societies but votuets Small Gesting have Gain - armes Most Ser Inthron apprentment & merst - au scholin Clarks by ballot Celibrics Boot recommends the intellen of the openines mentioned annairy dans lest trummerces Exiting state help Pretter private patronage - Certifically personal ments doto French

Present altrustic action ties many of 20 f2br book Smaltonevers all glong the him . porci forman fullation life exilizion publication certo fenconregimento hope lod of the Science Hered. Pop question, Stelesties Which are to fother how to ticked them Patriolin, Edirers, political a for rade . looking with nature Religion a tradellamentar your low send boward historical to weath Photoatheroly, Howing the people amenating somewhat help to grows feet soldership which is feet Smother Cadlary help though families plains fungatory now! t people Family foundary a new one their their ? Purownent for the clever, who not bet health or or orone? State influence Notomore, private. Socialem Finance Social Will Grandy Suconsagments marriage approximents - Stocking settlements orderten & fameily records of friends Retrospector Cons Sound got parents a shight rece of level of you win clabs Chil life Solection unplees many applicants

fron Constation, keeping Company - time of romance - in protongula agreets a woman because of formaller - in colonies of reales in a stepholotet man have agreed a parcial market of the second and giving of a stepholotet man have a parcial to make the parcial and the second and the Allaterial - assured resour of Support sell to be a futura face of profession should by marriage. Head dot - dance sound boils. class, from shoulighterty. Wil Checkelone, Range of acquardance a choice Social Deliceria Colobacy, opinio do changein, numeros to sirls The ruen are in a portion to more when this planer, they before

First steps to last for

Value of man 8: W" Fars 203 Memorest volume exters hoel A. Humphreys Stanford Co 1885 h. 531 The bear paper with a different heading appleass is Journ Statestich Society Vota (1853) h 38, (stopped to forumen) Age 0. Purent value of future Bureines £ 147.

future maintenance 142

wh: is boung t £ 15 dwn; 20-80 gens £ 5.

Secure of carmings over cost of maintenance £ 5. Table C / 536 Table 4 h 42 Good Paring 25-30 = 291 = \$22. 4 annually 35-40 = 201 = £ 27-4 " 40-45 = 360 = \$ 2h about wrone will be found man average there a very constant relation 1-th amount of capital interted in preparation Nott profit to therena behain a ver shight exuis Nav £ 151.9 in dist w- make a 179 - 4 great Noterine Ff 184.9 i' an estimate" 133.6 30 96-7 They are most from 40 returns by les J. Kay Shuttle 55.4 50 - che dit H.C. 60 20-7 regetion 12:8 70 -89 20 al 20

Economic Review Vol VI. 1846 Rivingale Hausen Cost & Utality by 9. A. Hobson 1 10 Zh wealth and "Ill the" 241 little in it From Mullhall's dictiony of Statustics ratio of working age 15 455 in 1881 day is 1th hop" males per 1000 inhabitants in Prestand in 1881 120 5-10 108 10-15 92 PAPERS 122 100 - 45 -65 over 65 in 1881 in Englan Maler Temelos Ivlad 136 68 60 under 5 229 115 114 100 96 146 76 70 50 112 54 84 44 40 45-53 105 56 over 55 49 1,000 407 513

Bursetts Hosbitats & Chartes Total Revenue from Voluntary tubo to charities nearly 8 - millions This three for church work 500 "Which brings the voluntary contribations of the herble to 14 millions at the lower comfortation. " securitable fact and one which illustrates the Envisores reserves which the refeatable charities may ret in should · they need further getti t enable them fully tidischarge 11 the interstant services which they render to the whole "community" hob: He shows that Decumen statement is guite esseres Attere ben "that there is a have which reforeheats the maying redd of charitable contributions from all sections of the public, " lack year" - He give cordina from the Effects the white faul a lime that of the Indian facurice and other freithe fand & concludes that the above thery is " not "baked whom fact, and that it is eatitled to letter force of weight "wit won of batiness." whene in 1896 of 99 London Hochestals 645, 620 What 1 145 mir cirray souches 2,205,990 Legacier do not bear my intelligent Instruction to the needs of the institution, that receive them. I went went around Nefort of the Local Eoverned board 1899-1900 Est speed Expendente 1090-99 In - maintenance 2,462,000 -2-764, DOC Maratenance of Levalier in County : Boronch atyling. -1748 000 1-971,614 Saferife bendence (the balance) other Henen 11,286,973 Total 397 In-maintenina viclasts all workhouses under the control

of the Board of Cuardines in In the melosteris is while 53,000 to mantenance of fear, small-pox & Joh therin pelients in the atylinas Mantenana of Lunations (explains dolf) the expenses without mintensua of parfect in wisterless of the deaf x dust of the blind be. A 402. Estimated hop? Sugland x wales 31,397,078 22,063,539 B Total receipts him over Nates C Rate her head in Estimated hote - 13 14 03/4 & Rate on the \$ of assessable value of 20g 11,286,973 E Goods expends twie on which of hour men: Einhalf 15 heat for service of the hor sh? be that of C appear instit to I in course 39 persons, or XIIX of to 807, 595 whom antorn haupen relieved in fant 94. Ply were what ungrents 9.841 Alle resitue 180, 201 were while males while females 314, 399 200, 205 children unter 16 senor dach hot IXXIV Sudand a wally In - maculenance Tolet expenditute in the relief of the pron Cost her hauter 3 1890 \$10.17.714 1 XX VII #13.11.4 1899

ager of Maler and Fernales in Boy or Work			
agen of Me	Persons +	Males "	- Boy a Wal
all ages	29.002,000	14,052,000	14,949,000
0-	754,000	374,000	380,000
15-	2,950 000	1,465,000	1,485, 690
20-	2,646,000	1.247.000	1.399,000
25-	2,350,000	1,111,004	1. 239,000
30 -	2.027,000	977,000	1.049,000
35-		***	
	Y		
Marca		40	Total Control
		TALL	
San San Laur			
11	1.6	Name of	
		The Said	
		23/202	
		- 4.A.be 1	

53/2900 55 2,65:2900 = 53:2900 = hof 155 000 contain lander & I females of the age 20-21 of Every 2900 person 265 bill made a copepler and or 53 coupler of between the agend 20 of to sunder 25 2650000 fitch of lack of the age 20-11-, be 58 herson threare 106 conflex 106/580000 5500 58 00 : 2 :: 10 6 : 100 51)2900 (37 290:25 = 290: 5 = 59:1 out of every 5 & persons there is 1 (with MORE) of age 21-22 24.9 = 5.1 In 29 million 2,950,000 2-646,000 5.596,000 = un Sad ver 559, 600 10, \$60000 during 60 gens or in 52 persons there is I hour at each of the Welans 15 - wht 25



Frances Galter London Sol bought a ajaccio March 14/98 GALTON STAPERS



motives of many kinds Select a call for expert in where the force in presence are as few as populle , as thote is which dry the idea occurs of raising the thoughts from a lover to a higher plane to walten whall feligied - leterning & reach the top. Imbitit all except the idea of owner climber, there is lette leadency in other entreson todrate the will act unbombered with chief fait from fatious We common forth will be contine t inhibit alies thought with the decord class center to opher a the ment is a blush. attention prevent motions from opposing each other in fall force, as the on not at the rement attended to is fainter than when it is In thoes that are incommentariou, except when waser equally faci and their they are more in less potent over conduct * How for does will determine conduct? . Store of energy annitable to any energiney, like a cister field with unter trickly trough a small fite - can drong get a gust by hordy after What determines how the tap shall be termed " Higher or lower? right a mice. Energine can in compet , there is no force is of forcommence with the motives The magnetude of templation and may be statistically related to the strength of for cientions Sofection overcome, but is it to in individual cases? Rather, when the conference is aroused it induto to gardentern of the templations however bug they be. Compensation cales in which treached property, wealt, is valued in money.

Free Choice between right and pleasant. Conscient sury right, body says pleasant. his or has not the man freedom of with here? No doubt as to the action viz: by inhibiting the non-felected. No doubt as to the source of well proces ingo the flow carried & turning the froctiveless top heap 1) I = strength of temptation when attended to (at a seven time), to when adapted to at the there C = - Contourie c (whe wantly is nearly = C) I the fations of the will porser at the same runnent: (it = 0 at first start). at find Blast, Flei, = 0 the former of attending to T or of white it is analogous the of turning a frictialess value, the two constions of Tagamets a and of C against to Ben Equally easy. The question is what derect, the choice? and C and T are foliced of a different order, and not medianisal opposition, there was made to be analogy to them. If it suppose them they have eiter mounted on the govern the down local is the one that is nevel allocated at it moment foresints Self a society ze Cosmon. A Colorige deallo printe an animal. (see - book) individual fife concurrent with organico life but no common consciousness apharents. Is it as slewested desire to with times pate one introduction with others. In segual love it is so. I have not been it is so. I have not fine it is so. I have not in conscience it sense of higher a lover dilies connected with this? Is nature always trying to evolve large organizations, my life is best the life of winds - lich -

aug 1/99. In the Cemelery Clerend For which Eva specules her outline que sona (beden of ment of different portrait of him first m) \$44 It is now generally understood by statistic, and that far I possition out long and when many object the arrange in corner in piter of ment to tober analogy shows the ordinary law of Error to be applicable they measurement of any host of the capturable holding of and their respective class places suffer t delivere the whole Series. " The subject was the fineway es analogous ord so for as the traced on interconference bal is before chewhen delies with the classification of a few objects which have no standy certain order of merit but are partied order of merit but are quite oursely ranged by many different persons, and which are quite or to be even in a trivial but typical of a dop and a fellow A few week ago I went I me Hollies to be photographed the sent me 5 allemple taken in different altilistes to choose from mistrusty my amjutured I asked a few friends t classify then is what they thereft to their order of ment, as mementes for friends. Being struck by their hifferences of opinion I became interested in the matter & marky the flator respectively from All

I present It miguing. On goel oceans the Witte pack was shaffled and then handed to the new corner, asking him to carray then in the order that most commended strelf t him with the best appearanced. Then I noted the results mitiglish by come when I stopped which seemed enough to They purpose of (1) The distribute of judgments in respect to Carl fortrait in shown & Fath 1. Percentiges are to convenient that Center tracks | NEA times in which the several tracks I to 300 11 obs 7 w the obieved fire an banklater wit then I for the K centering house, he succession ranges to V segged of the space of 20 each i The preent place of their avery mounts has to be interpolation, There to Alle work, if the portrait, his been fair saufles of 100 and the most probably of 100 2. The culture ends determine it no himes that and letter of peckine

orticles, that I am know word prices of certain charles of certain that when less very waryng ally int good blunder, to I fay no more. who they is defended of the cost of production their it takes no never labor & cold find a diamon of pure color Una une that is not, is to catal a but in probother to the demand for thes . However

Il Assessment by Votes, and le mes My Occasion and numerous in which are assembling has a collect when to ever a sum which is their finish most algoralph meets the represent of a particular cates. It was be a sewant a compensation to demages a payment for was against be depositely minted to be a sewant of the review of the service of the servi extender of different individuals are dustributed about it. men value of all of elien, with premencies afelorogeneately between the track and the track and the track of the tested exceed A, 12) that it shall not exceed T3, let the votes in favor of I be a per coal of the while, & there in favor of I be per cent of the whole . Let the tabular value

If a differs but Alighthe from 50, the moreolecael value of M 1 ming be found then M' = M + 9 x y

which were be assessed at once of the difference be thight
otherwise M' ming be that to the vote x the process of obstern

be reflected

246/32000 130

246/32000 130

300 - 130×16

300 - 130×16

300 - 130×16

300 - 130×16

300 - 130×16

300 - 130×16

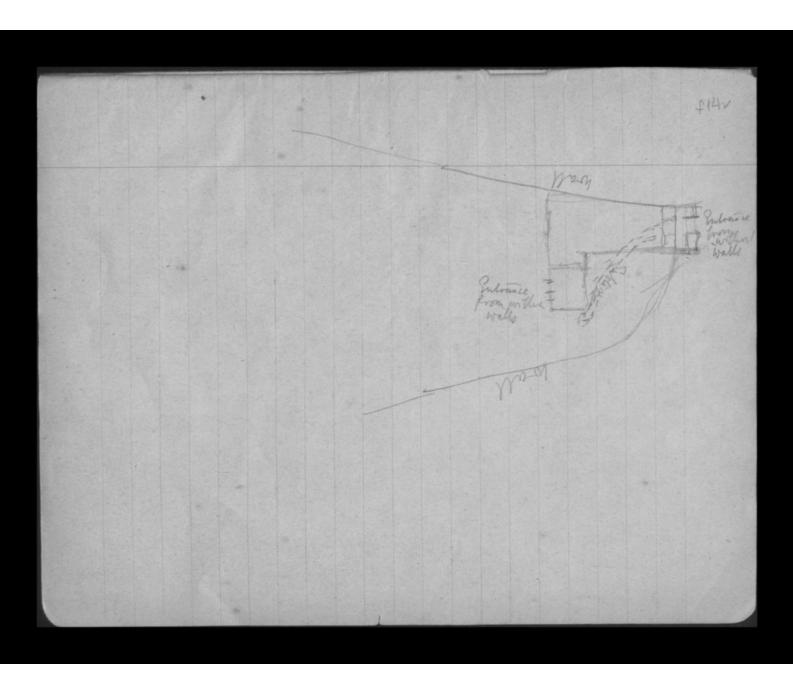
300 - 130×16

300 - 130×16

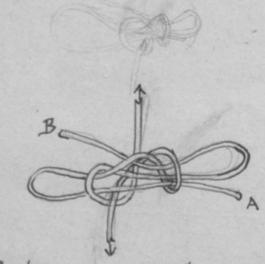
300 - 130×16

300 - 130×16

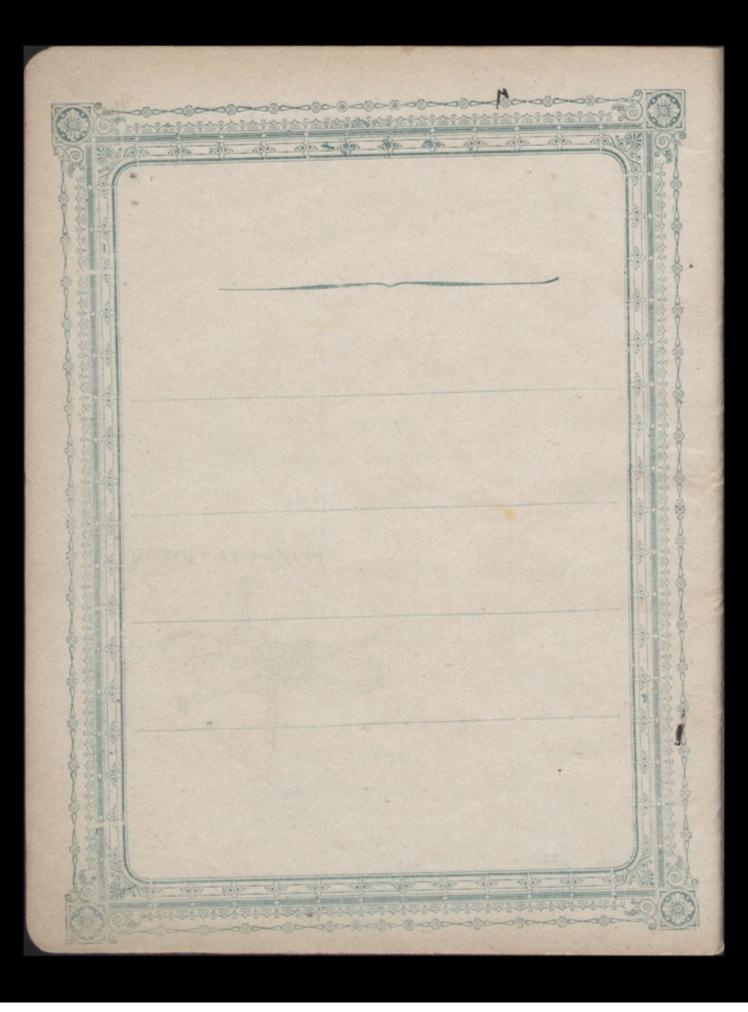
correspond ta in the following little lable (extrader) from p. of my Natural Inheritance) by called & and that correctionly to be called By and Let me to the human openine which we detere to find and $M + q \propto = A$ M + 9/3 = B Latty put on the botte when fall I would expected to the world be spected to the when it all I would expected to the world be specified to the best thinks it that expect the world not the other half thinking it too little. In other works m is the median value that tought for Stamples _ I \$ 505 liber 14 per cent think I much a = 14, b = 72 where x = (-1.60) B = (+0.86) m + qx(-1.60) = 180 q(2.46) = 320, q= 130 m+9x(+0.86) = 500 m=180+(180x(1660)=186+208 Which might he tested by a third with the find with a per ceal think 380 too much a let y be the tabular value corr: 6-c spanishe tuplove c = 48 y then y = -(0.07) 9.10 to revolve value = 130 x (-0.07) = 379



Labarrere - looleing girl at Calcaloggio Corsica Munch 21th /98 (the place for dejenner, when tomoething to Chrybelle or this, fm. ajaccio) he mad who waited at the Inn was so strongly Japanese in full face, in profile, in size whale a rown in dressing her hair that we felt ture almost that she was Japanece & descent. The however atterly deviced that the was authing bal pure Corrican. He landady was appealed to who as well as her harband said the same. The latter was beginning I tell me more about her parents but was intersupled; the only phrase attend contained the word "nullheureux" "euse" "Eases" I dod not distinguish which. The Case laughed hearlify at the iden, He humself is pure Costian a war born at Vico; he knew the girl and her family well. I tasked him again in march 24 when returning, and nothing could be more emphalic them. by assertance that it was impossible thegirl the hear Lipence blotd got a Two things show meatined. 112 cheap Chinese scrotts wier hing atte wall I the diving room. he were bought from a traceller, her lar ad understood. I dow sunder ones at another of the was we stift at . ale I saw a traveller harrier with a sort of contermingers cart fall of sheets clother a knic-knoker in at Socia . (2) a boiseller who where French on whom for met at View a saw again at Calcalossio has in some restrects decided Japanere features It was a cares or croscilence. Instice nottes instance a sixt of about 12 came in the same which with them to Girting and the way befold the Corrier man is never faster to the Corrier Recollect alex it man Freres)



? The knot is asymmetrical



Eaglern Turlestin Thibel humigrand has Asin , Hitplaces to ainos Japan Eastern archifeluse 599 Vapuan & Males very variors aboption and lew Berbers Follatale herro Banton Fan Witer Buchness a Hollants) Aprica alaction a concur The arab cold Berber negro bender by think The Surspean . Beckunn Frago Howard Maly & Radlell Media & Radlell mada carear america antes Hules Mexico agter Purches 5 week Indies Brazit Vera accentine die PAPERS 2/10/9/6 new Zealur!

Erquino - Cherkelii Yakests a Tuaqueses & Samozedes, Lafes arctic 10 Europe 29 United King Im 43 Cells, Sayon Norman Dune Cetts Tentin Hasque with forth goeth colonis France 103 Belgun 11 Heunt Wallow with time Spacethe Scandinavair, som Lables a Room Jenmark Iceland French Walsons, lews Danes Litheraniam Czechs Swiggings German Stook Crechs Moraman Stovach's Nathensais Poles Stovensoms Cavatrain Services Jews Normanias Magyan &c Thousin 305 Thereing nomans Vitiroth Vandala Suevi Harque 2 39 3 parstions on legenan Ereck, Frais Raturdes Copath, 29 och try brid race lews Venetian armenim allamine Cornel and Twiter Freek armenia Kurd . Manual Funcional Margal willen Kyll aria lurke 1. in area atia 416. Two Heins arabia Perio 425 Perhan armenian Tatar and Rurd 631
(August)
649 (Frank lotte) & Frank and 3 coul varietà) largan
503 Cimpetere Hindu Vedrah arab lunchem afghamiter India Ceylon Burmal 513 Siam 520 Cambradia 529 552 Minglion , Misolie Guneron (310) Jule Wites) anoun Cheria Two third Rupian - Samoreter Other Talars Ladas Tungar . Kalmacki Bariets Chuckthis . Tajiks Mulian dei a 393

Egyph Syria atian Milian



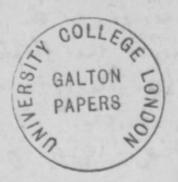
Very Motern America australia Man Zealand Capie

Prehistoric

Centemporary barbarein

the Balment says (Ps. 58) The ungood and Trovard Roen from their mothers would: as soon as they are born, they go astrong, and speak lies. They are as venemons as the livism of a serpent: even like the deaf ander that stoppeth her cars; which retwell. to listen hear the voice of the charmon, charm he never So worth " habinist proceeds to the fouring apostroble it them fall away like water that runnette apace. let then containe away like e smail a be like the untimely fruit of a woman a let them not see the fun .. The righteon shah rejoice when he seeth the benjance, he what work his footstelles in the blood of the ungodly So that a men shall song! benty there the is a reward for the interest the carth? " " a for that My theory is most moderate in it conclusions

Herenty for



Charles anchester 280. It: Catrordinay how intende is the hower of application in the case of these who know a marter are application they can worthing as well as serve" the nort of a dog is more important them his inscender strength, for france Speed)

Tendency to visual referitions (faces in a procedure) not unlike the leading to repeat the same sing song nitt varied words techner thinks I 467 that these waves of memory interfere in combine a that their is an important matter in our physibilities of memory.

Lecturer II 675. Quest a lotherter kind of tention when we have been a loth attentivel, I that when we try t recall a harticulus sound is sight. In the first can the attention is triected forward; in the latter, in some part of the brain [The eye are that a twented without - then but by Technology of the brain [We content Brown banking experience of last in the fight of the brain of the brain of the brain of the brain of the both of the brain of the first of the best of the flower (5) this wife . 6 5 Bush. He custo full 3. Souther flower again of strain when actending to any thing which is referred the organ of seall been a more muscular feeling - a sort of reflex action

- The more I tainh of a form theleft I remember it " Chaterh: boy - & allery



The world is Sadder now ... markened are getting so far beyond the childhood of their Tace that they Scorn to be happy any longer. Of Simple and joyous character can find no place to itself among the Sage a sombre figures that would put his unsofthisticated cheerfulness to share. The Sutire System of man affairs as at present established is built of purposely texclude the careles & happy Soul ._ This the vion rule in our day to require an object aux a purpose in life. It makes is all parts of a complicated machine Scheme / progres, which can only result in our arrival at a colder a dreview region than we were born in. It insists whom Every bodys adony somewhat - a mite perhaps, but Earned by incepart Stort - to an accumulated pite of usefulness, of which the only use will be, to burden our posterity with Even heavier thoughts and Those inordinate labour than our own. No life now wanders of like an unfettered stream. there is a mill-wheel for the timest rivulet to twom. We go all wrong, by too strenucus a resolution to go all right. ("Transtomation" Chap 26.)

Frank News * (Inte) according to papers found at the Tuilleries 2h, h42 hersons have been arrested the political offence, lince Dec: 2, 1851, and 14, 118 have been transported, exiled or detained in prison. No Wonder that the Treach sock in wiecetore menerconfetent to bode them a their relacel confete backer it thet tweet clikas Competent leader

Various. Received Since leaving home







Dogs to hunt men - war. 2 40. F.2 athenoeus . V. In the fertival Given by Holenny Philadelphin t the alexandrians the Ethiopians brought ivory coon, gold, 2400 dogs bird beauti se be -Julius Valerius in his life of alexander the great speaks if a tribute seat him hom Ethispia by Queen Candace. ale kind of bearts 350 elephants - - - ... --- go dogs which hunt men --- de. (I do not give the above in full, as I have just jotted them down to myself to 2e-read o berity.

Supplien Stree Vol II. 1576

Pling VIII - 40. 42. G

"The Colophomism and Castabalein Ald
maintained of troops of dogs for heroice
in war & these were but in the van of
the army a work never known to
draw back a refer to to topt.

Pleg works most faithful allies
& never wanter wager."



120 natives & near, Call baug to be addrifted as my Coll built toward and lander toward and brailer toward abouter of mulicular abouter & repulsion, accord on different

Chaos written a 1863 PHE Or takey it ap you many

see it-traversed wall

downlines Getravaluing

word, which all find

trat seems as though the

bushealthe balana munt

lud boan to ig E spell

the word crack jaw in

as may different style,

al the could - . . It the

comer home bar a horig

leally—that the theroughly the

has how throughly the

Uped Kempe 23. Gilbert 9. State 9.

GALTON LOW PAPERS NO.

ATHEN EUN TUB

. ? t follow conteals



GALTONIA CANDICANS
(1: Decaisue, Flores et Berry, *** 1332 1880:)

S GALTON

GALTON PAPERS We brestitute in Just and town of it fanction Ith bears to so far and an aware us corrobat Whiley by gull the reverse come to each strong coolulistics most contest of support of untreciously brage collect between Wherever mig writer, they a It question much thrown in sellect I appropried cases by person if the honor well it charden of the heron dealt wall and who if home the should be whole made it hurflines of the collection of after much corners Margare, a root on while to free a on four strugh contacted clearmell able geleven the markets he seles bays to them they with notet & cosers of delices & at pled tograthe mellos to entrepared in But what qualities fermi will entertain 5 of what will first and and in who berentowied devision bunder maningell

Suter 7. 14.71 years Rept à Taxen. 400 What 10.10 afressed. 12. -422.10 Chire, Sept. 67 less Stables. 40 382. 10 Sag \$400 a sear. 400 Potat lypend home 11.11

gas 252.07

1363.17 where the House costs us. \$ 4/8. Government Jing 500 be carri

ffv House KSS.

Former Horetches "mothers of 8 12

Thought took think the weeky
the hoper minds to a that he week
get made as about a far not
get made as about a far as
itself perfect enough of be a as
argument an original sin
A Honer's continual allerious the melanchit destine of the human pace.

bilusting is a coad instance (1)3: hunder former about 3 are curved reversely 3 direct in not duodecimal of all is and Softwally to get person to draw a parot (3) hill howen sees not say the numbers but the objects they referred X same can never emprehend numbers Mr. Holling & albarier istillized lady (43) Long Butter must be in an idle lemmother that of mind the conference of clean writte numeral as on a State Carpenter rule, augular les? berney clock doquences coqueles abaem carol hagis cong u measure augular les .

hele à vales gettes of in life Bertiton garren on the Holderfor repell classion references

that if on name appropriate t mood - severie erotire doner manin. Junes (human affection)

the and unposed appropriate t memory John Kall foces, his inte doller meters books on their affections

the and imposed are a long time to making themselves of knowle with broken C. Elliot

Throughtle limes are a long time to making themselves of knowle with broken C. Elliot

Throughtle limes are a long time to making themselves of knowle with broken C. Elliot abstract approvatus as mind of cholden half willed herres . Ward good completed to the and seemed a mand abstract seemed of the approval of the approval of the approval of the part of the form from the perfect of the part of the part of the form of the perfect Specia card with Bleater - behinder colorse quote Neve Loring michenniach; friend with sound take the form of waves The Du Boulage they are continued not there as weed as of mule Florer Certain muneral, become aspotens when applied theman life a wine Louis form of ruemas ruemy in families (Evre Booth - arch. San. Lacambry Estant ruerory. There sing the story of the margical booth rundles . Artistic downer I music - hueror always floater in the sund thousand thousand the straight home of the straight had the stra In 10 of the faculier Was are 55 Cares (tag believe Six Heredity see Cole Boot - 120 - In lo of our faculter were are so the Head out of 73 caren out of his own facult god but a when family 11 book theringle it from I also book

A MATTER-OF-FACT WORLD. - What grows upon the world is a certain matter-of-factness. The test of each century, more than of the century before, is the test of results. New countries are arising all over the world where there are no fixed sources of reverence, which have to make them, which have to create institutions which must generate loyalty by conspicuous utility. This matter-offactness is the growth even in Europe of the two greatest and newest intellectual agencies of our time. One of these is business. We see so much of the material fruits of commerce that we forget its mental fruits. It begets a mind desirous of things, careless of ideas, not acquainted with the niceties of words. In all labour there should be profit is its motto. It is not only true that we have "left swords for ledgers," but war itself is made as much by the ledger as by the sword. The soldier—that is the great soldier-of to-day is not a romantic animal, dashing at forlorn hopes, animated by frantic sentiment, full of fancies as to a lady love or a sovereign; but a quiet, grave man, busied in charts, exact in sums, master of the art of tactics, occupied in trivial detail; thinking, as the Duke of Wellington was said to do, most of the shoes of his soldiers: despising all manner of éclat and eloquence; perhaps, like Count Moltke, "silent in seven languages." We have reached a "climate" of opinion where figures rule, where our very supporter of Divine right, as we deemed him, our Count Bismark, amputates kings right and left, applies the test of results to each, and lets none live who are not to do something. There has, in truth, been a great change during the last 500 years in the predominant occupations of the ruling part of mankind; formerly they passed their time either in exciting action or inanimate repose. A feudal baron had nothing between war and the chase-keenly animating things both-and what was called "inglorious ease." Modern life is scanty in excitements, but incessant in quiet action. Its perpetual commerce is creating a "stocktaking" habit—the habit of asking each man, thing, and institution, "Well, what have you done since I saw you last ?"-Fortnightly Review.



T OF BANKRUPTCY, BASINGHALL-STREET.

(Before Mr. Commissioner Holkoyd.) nation and Discharge.—Saltiel and Co., at 11—J. Sam-F. Brown, at 12—R. White, at 12—G. H. Mitchell, at 12 t 12—J. P. Curtis, at 1—W. Tatum, at 1—C. J. Adams, rie, at 1—S. J. Westerton, at 2—M. A. Tredgett, at 2—R. -past 2-Beck and Co., at half-past 2. J. Poland-certi-

(Before Mr. Commissioner Goulburn.)
, at 11. W. Cockell—release at 11. Disputed adjourn—Strachan and Co.—dividend at 11. Last Examinations e.—C. De la Fuente, at 12—A. Brieger, at 12—J. Smith, omans. at 1—S. Margrie, at 1—J. C. Clarke, at 1—J. a. M. Barre, at 1—T. Spicer, at 2—R. T. Smith, at 2—P. —Levy and Levy, at 2.

(Before Mr. Commissioner WINSLOW.) Co.—release at 11. Last Examinations and Discharge.—
at 11—H. Wilshin, at 11—E. Oliver, at 11—R. Rushbrooke,
11—G. Lucas, at half-past 11—C. S. Ruel, at 12—J. J.
2—J. Gray, at 12—D. Brett, at 12—R. De Carle, at 1—J.
1—T. Banbury, at 1—J. Pritchard, at 1—W. Birch, at 1
at 1—J. Allen, at 2—F. Parslow, at 2—G. Wilton, at 2—
at 2—T. Pain, at 2—G. Rogers, at 2.

(Before Mr. Registrar HAZLITT.)

on-private at 1,

(Before Mr. Registrar MURRAY.)

natfield, at 11-Richards, at 12.

(Before Mr. Registrar PERYS.) -E. J. Brooker, at 11—H. Mercen, at 11—P. M'Farlane, leman, at 11—J. Harris, at 11—F. G. Lee, at 11—R. —J. J. Bishop, at 11.

sioner Goulburn is the Commissioner of the day.

r BROUGHAM is the Registrar of the day.

CHING AFFRAY IN NORFOLK .- Smith, 's gamekeeper, who was so severely injured in fray on the preserves of Viscount Chelsea last yet fully out of danger, although it is expected er. The poor man received the charge of one er's guns in his side, and was afterwards struck tt-end of the gun. The poachers were not known ers, but the Norfolk police have arrested on susmen named Benjamin Cator, John Ford, and

The Finchley The Stafford The Emile, f The Carolina The Henriet The Tientsin
The Adelaide
The Lady Le
10 N., 25 W. The Bethshar The Miranda The Laughing The Mahabak

HIGH V Morning ...

EARLY. the opening ciation, Mr. various intere Boston, the hibited a larg relics of earlie dustry, durin in New South Winchester-s by Mr. Syer discovery, an of a "lake d cussion, in Roberts, Mr. space had beg square, and n 4ft. or 5ft. di rows. Abov ware and oth remains, Th the piles defi the age of the 5aft. long, an was exhibited

Rest! Mest! O give me rest and peace!

The thought of life that near shall cease

Has something in it like despain,

A weight I am too week to beer!

Sweeter to this afflicted breast

The thought of never-snowing rest!

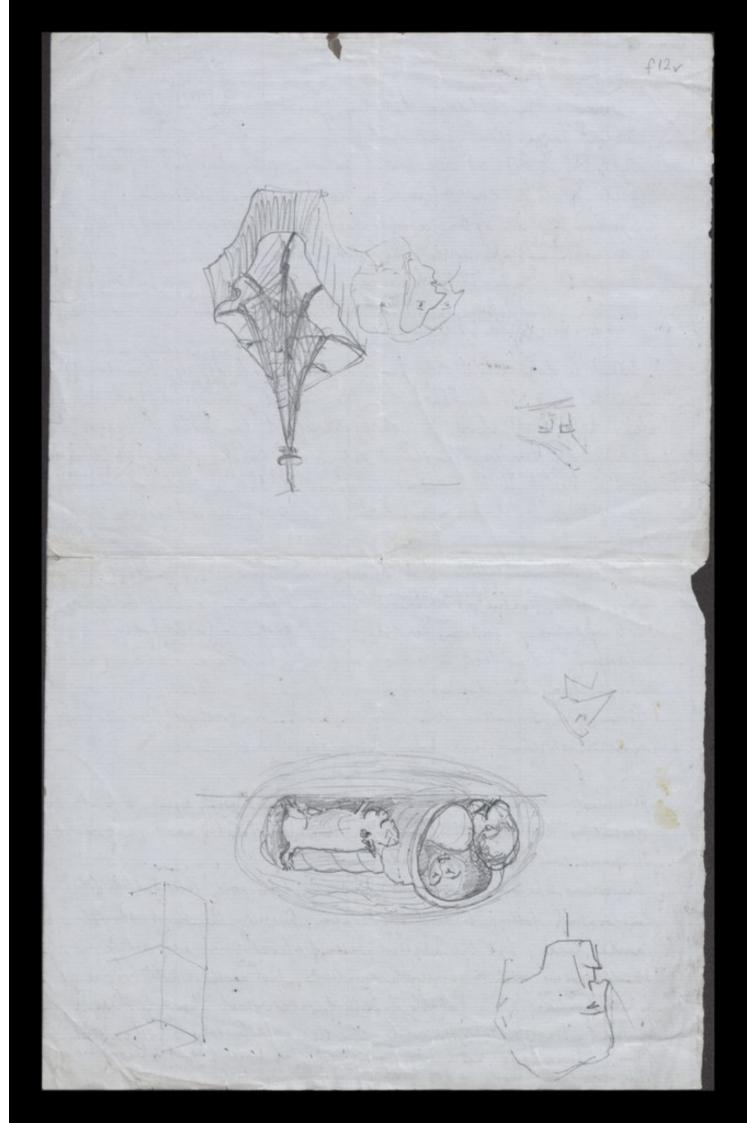
Sweeter the undisturbed and deep

Tranquillity of endless sleep!

(Long fellow - Solden Legrad)



himsen the children dabbling paint Draw facer tim fire ard bit toot as accounted marks may inflict the factor Steh by stek evolution - in no prearraged direction Stirking finder often well during the process and may as with Turner arrest the imagination Hender and Mr Harvers , Hender's more by jerks from an confirming The mind can detorne, obliterate is internity any part is which of an innece which is more from the benefit can to. What is done slowly by her, is more rapidly to Henstown? moght to done by a flash in the mind. into me water steps being too rapid to conscioning, to lay hold of them Who does one image stand out with estracidinar promines this a habit of the mind to admit of this - natural minutife. brought on by drays - morbid. is moforte influences Suffoce. Mapiae in fluences inffree to direct apocialisms incording to prevalent moods evote, fearful phosets boier-leke geometrical palternos, animal former, allelia ? as to vegetation. Children's describblings (? Oxistrabula blotchy paper to solvollogs to draw faces as in fire - doth in a ballot box. a return frence mind the beliefet of impulser drawings) Ground work to hallicinations like Claras dots. in a girls boll, in all rough Geographic with culture in a paper there is a map. Hallucinstian must be one to hypercesthetica of the visualizing organs. a facet ofsociations that is ordinary fall below the tureshold beginns high above it In reverse something of the kind takes places. are visions to be tratted . (religions) O'Callaghan's voice Peter Int tell fibs" Conscionant follows lines of afrociation, purming the most strongly marked line, but the physical bases of aprociations are active in all dimeneral as in innumerable numbers, just as the whole body is a him faction? Probably the fall of conterrebuch through these is I him. It is a band and a mere time to but sever of south a heaving are little more than human - a dos hunting his ground regularly.



Perfection is a relative not an absolute term. that is an animal is perfect I in reference to the circumstances under which he lives. A refined man is excellent in shighest social life and a weather bealer social or in rough see faring but a refined man is a minerable dragsled object is dirt wentle at a sea just a the result of lace in a drawing rough social is form of his kind but it is absurd to argue without kind in intrinsically the best. So with rien verstand birds a fish. 13 There is no med thing as a To kxhor is a To Lyabor What is good a beautiful tome man is one animal is ted to to another, 3 Existence without affection is quite conceionble. a fike is a solitory fish, never reared by a mother x only affected by periodical sexual possion: — His religion ivould be the pleasure of pursuit, hopibly estheticism elso. For he was dearly loves certain shot, than other Lubbocks ants The survey of different natures - bush on the Elephant on a Camela suight be supposed to take in working of their States of carryly children, about the Zoological Glanders. Complicated but durable mechanism - a barrel - a wheel - unberelle It is reasonable thefreing that every spirite troped as however faintly troped as however to organism my extent by organisms and by complete to organisms and by complete to organisms and a coul, Main reature is slavel be regues the Support of levelable command of deet of a superior never mind who is when - the as a climber plant that must have explicate toletter coals or tree of hurte or wheat not This thew the dependant quality of the mind not the . . . I what it climbs in · · lorar away it dies . - -



more reloable quide than a steed of the 15 ble.

The sculpter of their status (moreum auratius) knew what a king theuls be & Knew likewise the heart mankered, whom it creates a true weler under orgaline title as a child it father Mestare of pursuit is an especial element of an ordinary highly to the life. When a russe is anisaal leas every thing he want as food as be want it, life becomes wearitorne begond expression — the old bay is that a Dabe who has get the garter is one of the mostion miserable of ruen. He has nothing more to live for eachery (1) It is throught in Supland a high moral duty to toil with East to repose contemplations. We may be Squireen after all

University College London, Gower Street WCI

The Derty which his best horse to brown - fellowships the best man, but not to breed from - just the contrary. Suppose is was enacted by Parliament that horse racing state, should be instituted by that enormous value that all good horse, even than t compete a in took number that all the first chal, home were than t get them a tappoon a further smalthment that he house that one a race should be allowed to breed, what a colisation, effect on the race of horse, would be produced; see this in precisely what has been dense to centure, a the Cale of fellowships a state more in a celebrate priest booth.

Facer of Source 1882

Sub 10 h. 5

Feb 15 h 5 h 3 Dofun cycu

Feb 20 h 13 F has bright

In the CCO white they

be part they

be



University College London, Gower Street WCI

Telephone: Euston 7050

Success in life requires self aftertion boldress worldlind, and is many retiremention more devotion. When a man attempt, to combine their incompatible, he out does so by conscious or unconstituted and deflicit which his children are aft to be through a to despise there they children of had men do not tread in the pione by father, of their parents lives. They go trements deple rooty actor - Balli, saide to be a Saifate of the gold fortune, of pione when - Gurne Stiff them Vand.

Gelemachen discovered by the lepinol of the lepinol he lepinol of the the transThought to great sine transmilpion the great sine trans
- milpion the great sine trans
- milpion the great sine trans
- the boom lepston's cine
bistinguished grace
the see Context & refer to
original.

Sp. Octheris Hibrori 3iv Olg Para and 3ving 2 Table Sponnful with one of Water hira of thria daily answer Carb 31 min Camph 31 min Camph 31

University College London, Gower Street WCI

Telepho	
3 Inmance distinsti a kelling Albrick 3 Bayten workmen grant stack	tweed It when I vade
3 Religio preacher marriage at one (Spectater) Brahmini 3 tomi - celebras at another. 3 latitude) ash montes, then have been an arm mone pride & greed to	- (but they said not be
3 grounded as the few of defethelem line	the area of An and have
Bang Murringer of ferlilet, - France	negetion Falent will
Thegitimete children	
Augustus der Stark of Sayon had 400 Megiteruste 21 chitorem. The fact is stated in Minrray's Hand Bk N Brunary Corock soys he asked about it in Germany & people there always knew of N. V.	
h Unusual natures - women who have served in requise as soldiers;	
thosomond wit will had slaws & 3 mary it Dorotheas - men fairly lech	
Carte world be incefrant broken true 4	

University College London, Gower Street WCI

Telephone: Euston 7050	
The Contract of the Contract o	11
There is no reason to believe that until civilised man appeared on the Earth sine spoke	
laws. Now Exected to blind unter whatters and gradual extended to a unknown degradual	T es.
I There are alway I sun numerical there I should be the least fet the are arrall the most fet.	
Scholars was have discouled the nervous prover.	
Attallier I Endustry my relatively helphy of when fort had resultified worth he as	
3 becarde intehendence vredech to Fing to	
3 Slave treeders. Office; for 6 Single timo	
Great offertuno - loss	

University College London, Gower Street WCI

Telephone: Euston 7050

The production in destruction of life individual life is apparent as matter of perfect indiffering to the scheme of nature but it would be greaged to think that their way no purpose in nature that the production of life did not depend on I have general laws that would be furtises. and the gention of it would be grievon it that our lives some always work with a purpose, I we consect tolerate the idea that wie whose nature is full of purpose, should have Individuality been as certain a set to up as an en con conceion although our existence unity in unitlet a poortion of the life the world. What spotence then is if to a superior that the opened of their? Much if he is lungh to understand that the heart of its original is not her sistent. Men in the victor of life feel it strongth but not always the weakly or the old. The old and caulify of proluged life the worker or the old. The old and caulify of proluged life the worker of the old and caulif of life. The negatives separally delast think any thing of their herbonal light. Therefle though we at the mental her feel them upont hefer has shewn that we need not a protocol, will not always teaking them to. — In mours a in madnet head of herronally is lost. I suppose the may be looked copies as the becater with of another of openingtion. Make a Franklast in the he must him. Build who office hay brown to take an animal form & consciousneh eather as though a the short entires when a batter is head. I big the organisation rather than the diffe that is hereitage in lost.

That deef seven that proton conviction of its own immortal which general love mover bails to bring " (Transformely)

University College London, Gower Street WCI

Telephone: Euston 7050



The mind may be compared to an Robian harf that responds

The mind may be compared to an Robian harf that responds

The thore external impulses above which which it strings

are in unism. Therefore its during has a two fold origin.

An ine dense objective x in one Indicated.

All inorganic nature is hervaded with latent life, really the come potential

across as the atom are built int certain shaper. Is agained, justices

shelicit flows from give x either when they are built at a better, x mainly

ant acid.

It is the claims of living creatures not that one part

of the claims of human beings, that demand one sempally
a dog or a horse has the same claims as a man, by quint

Suffering

University College London, Gower Street WCI

Telephone: Euston 7050 If case of the individual date, from the appearance of Leadoning man then we much take a diametor cult offorte biew of life to the Scient. He appeals from the impatice of man to the right consulption soil who shall reduce wrong, we man to the righter whefford End who shall redness wrong, we on the other hand appeal from the ungicled laws of nature to the human effectives a kind lines, of our fellow creatures, Except the bond build the house he theists think it a pestiling housey to confirle in natural cases alone - Bationalists think past the same of confidence in super natural ones.

Attend codolles the individual Public school life corrects their - women crose had sort of theme to do children.

Then I business forces is . Nature soldeath cares nothing for it theme too cought to do over best to represent those for it theme to the work to them writed that the bat to discovery theme . - away, thinking your dist water soul man is the creation of a necessit - as their are ideals.

Then it the creation of a necessit - as their are ideals.

Then is the creation of a necessit - as their are ideals.

The worlds their planet seems to be one of them. Self conscious well - a Seaman will ideality beintelf with the like I his ship - a she labours in a sea way or stagger someter the blow of a heavy sea or plungs forward, goer their securs as though he himself were striving. So is horseman with his horse. So is watching the time of the self is stricing. So a horseman with his horse. So it watering machinery that act, somewhat irregularly. If the things or the machiners had self consciousness, their efforts difficult movement, would appear to them to be the strong that I would be taken in letter; revolate - the y metan orphory of force comporation latent had cloud wind cyclonic staking make do complex a system that it would require an intelligenen. Incomparably createry than mean intelligenen where feeling into these came, we can intelligene to analy se them for feeling into these came, we can analy se term of our feeling in the years mechanical pure a pull severy the letter is no show to free with.

The world both phenomena perhaps theraging like a cloud in a by blue sky is a warm in the dea surface. a people's manifestation of the great ocean of force.

University College London, Gower Street WCI

Telephone: Euston 7050

Anstorney. The children of men who had won herrogen to fine to reach than their father at their children the lower of small the light when they should come externing of ment. The highest been a that when there was quarterning of ment for both wider, their when there was quarterning of ment for both wider, the should be dead I make mix whitever spany with upthylary ment I like a hood as hybrid on have breed in the formal and then he as produce not the formal the produce hy trails on the flow progen white any thinks in a purity of the has perfect cook make the flow progen white or they will be has a bindividual life or conseioutable can be from make individual lives.

Individual lives, the first in giving the Royal Soil mit who is the same see Proved which has an individual life or conseioutable can be further in 1867 to Worker.

Individuality by mental ailment, one acquires the feeling that was a system in scribble with the course of her wind is not photostable but sally all halfing a system in scribble with the wind a line with the feeling that they are a little of helicinates, of doubts of individuality occurs the winds of helicinates, of doubts of individuality occurs the involved all helicinates, of doubts of individuality occurs the involved with the winds of helicinates for hours. So may the million that they are the first which is the work of the milt are allowed which an alive for the winds of the whole of the whole of the winds of the winds.

Brutalit of The action of mature: laws tempers

University College London, Gower Street WCI

Telephone: Euston 7050

Bleeding It what do to me to shew how the Ruman race might be impressed on principle, such as there on with calle are bred. or Rosen from the least of Plate in the Republic. In shock in the Republic. I and discipline would shock the least of the societ of the slave a we then the to see good in advance my street a D und ables from them. It has the these confine surgery to agencies which are actually tolerated a swift remarks we expected to be tolerated in the present civilization.

account of the Value of a child prospection

I'll fatal tile flagues rose & rich

Those who debauch their conditions by backless indulgace of their instinct for science literature ast, or runsenter exertion.

2 after sons of blind action intelligent a merciful man is now appearing in the Scene

Men in these civilized times especiall when wealthe have not to fight the battle of life to any creat extent the may be compared to potter planty protected from the encrosolunate of other blantsk. Hence in the far puture landout so many of them reased as the garden or orchard house will conveniently contains for that require that the sort of men we wont a the proper runder of them

Individuality, it, necessity she not be invisted on by Trinitarians, Find Their creed contains an instance of the opposite doctrine.

Cordial kiestuf to men however bad in nature moral a felegiocal but sterrepel, against their license to perfectivate their race.

"Rach individual is equally entitled to whatever diquity "he is achoble of tupperting. But the Rort church as least, "was in profession of me proof that all men are Equally capable of sustaining the dignity of a free condition" "see Home. 140

Individuality I look when my tindividual life as a wave lifted out of the infinitely world a cleap ocean of the Divine affine, not which at my death is will again tubide. The continue account of my triffferen ging swill adard the thefer of the

Indivi-- duality

University College London, Gower Street WCI

Telephone: Euston 7050

Distinguished ruen comments
many distinguished wrong to the fit of proposit the
Control Philosopher Mill re
Posicalies to his Liberty
Compte & his wifer of thom Baha
Maris & authority of thom Baha
Maris of The Solvey winds
Marter of Their Tencorks winds
white of the Solveyon.

3 Cabalan yes but be meferen bes

Dahonay amazony are colibrate hence the Custom kills the goode for the Sake 4 the Golden Rgg:

Normans XIV. 7.8

For more of is liveth thiniself, and no man dieth unto limitely; for whether we live we live unto the Lord. Une Lord whether we die we die until Lord. Whether we live therefore or die, we are the Lord.

The feell influence of peoprose our wemen ferrent.

3 women at level as compared unit affection
women of hishert offer remain unmarried hory
historiance or and carring to forfer day free him.

Nature tolerant of difference of behief intoterrunt of changed belief districts of min.

3 Proprehm of an artainter best of real

University College London, Gower Street WCI

Telephone: Euston 7050

The Earther harface a its animal life already bustoantly !

3 Processes coffee fin other to bes Wilenam Tylor Soul Hist marker)

Browles think I am los patilet of the weak 3 otherwise the caste w' become sufferentiones a your palerment anger before it is become

3 hulliplicater touted inferhence 3 (many a sufference her bal expectation also

3 Dancon in Firthly of your circle

my note - So eval rank of the motter belevior) by the rank acquired by her shirther - this shirther back en noting - cont

3 on which insufficient interestince checks feth but an can preted it fact.

5 Erewon - Ell health is wisled

I be with this owner chinen about 30 green a war o banks "A man of oos"

Clerk in 800 Hiver rise in income gradually who to rear \$300. Here is home trangeling It of the propagation when the state of the propagation when the state of the for when continue increasing who the too their andter for mer which few get. It the thought that the \$300 a year was when the marrying trure cleaker get it we are accounted to the marrying trure cleaker get it we are accounted the age of 30-31 with marky in an account of 33 (Rypn)

1 Segustines of members april 12 for Clab constituted - find become " Brace live cut fresh Govern to Culty your Rosselfer Govern to Culty your Rosselfer Course for F. Molgrent Box describe on Cut, meeting Ill Reserve We letter in factor to the William Wisherson p318 - Historian whatter so Theren it is be Intreated to retroduce graduater of Cent : There we England - no restle neitners for hurested & no Gapart - Minute book by Six H De la Keele & Deal & W Boy W. Wheelston laid belo Club & collecter of carious letters from Franklin Brother & Allie, Teleting to matters connected with the Soc a real once which is unterted all numetes from So B. Franklin about what took place at the loc other Presitting i recoal was awarded a clear appointed to Endeavour & prouge Ins letters related to this a & entrent their to the Club - 8: Knowle ration the lea grown in the the malyer a related It hittory of it introduction there to year ago. - The Treasure is houled I witest in weather book as abstract of the principal bonts brought terment . Is welfer the orienter (be read at the next meet, It class of approved the species & the chas Order with Forcer question of hors for naturalist, the adopt to French by them of successed - mostaed that he care it but the creation better the next rection of Ball after 6 th spenistratives (2000) - if a trade object be held close let cyc it because in trother weight to but if a convex less or compound mise, be placed a the other to do that the object his between the Sea the lear it becomes totally well defined a magnified _ I hatte uspead the wor a thead and of the tried that was been 17. hermer hough forward jucilie is of text with the free upol Set. Escales the be anited a their labour concentrated & of so how 6 to ev profund adjacent literaries a common meetri, room with some publication by UMS. of their bud leading I miller suggested a four Comple handu a Olle appointe to report in above ocheme Report then thee _ To apply & Gooon for adjacent locales - bath for the bacant apparente is derivered House. To my therebent of the facation to conficulty - and, discapera theren - adjourned 26. Cayperter to Intention. What are the Cordences of the Carth havy been mice in a liquid state 25 Fulke Heculia in the justa bonton 1th Laborario of the Se: Coccides 26. Saily accounty Rule terreth minuteer theorie Saperinmeray in popular

30' Commed aspeed the the Previlent of the following Societies to form a deficially t god - Doyl - Sunan - Geoterial - advancerial - Chemical - Katralic, . 31. Whentsline read teller Juster & Hoster - announcer menurement of Kinchin Junga 28173 & that it is the treed (Known) not enth world : - high prairie of Wangles try: obs: 32. Sea serpent as described & Capit Mi Quail 1lt Fatalus frigale much discapin by Bell Legell, a favour fet Printerce & give man deland of dea terpents bei reporter a of one bei cartashere al Stronta a particula about its thelely - the war of think fount - had yot was mentioned Is a carpente, a found the bo feel los Bell doubts. torbject, haiteen flower bones no doubt over wer will lagge it ever a by seal but how about It to feel ower myest there may have been I but Bell doubt the Coht a communication the offert that plegical science won to be bedo in at Sten, and enterest a taliffaction was their 43. Il Bust better inglests that riellor do at Bumby weed and I fullated with lad unintenely - But and make a weather a magnetion lot Salvine & Togreed . The Trenurer (Grove) add Whealotim of any expelant had been furthered of the fact that air ofining learn a tube when a flat truspace without of blowing their away altraited then closer Whentolin Refelan Good offered andthe exchange valued in I to bar sinking before a flore Green reliented pergrape as the Februarian of Societies" - letter tend fire to the with tomalgar- repail - Forber communicalis, letter lin Mr andrews with is collowing marine not lictor a fatime Sparie - good milarit between it fold t animal is bay of vice & those of Balani - soul field. I infer an ancient continuit, or contiguit between Sham virian) De la Mos a visiter - Cofelain Asin Chesenel Engreguetitales of browning when wellis scroled between the file of a inspect " Placker sould be lind observed But the abtolate everylet of certain liquids increased rules surger influence. Again that of his later of metal converted by a galoumornele are held at the land, when one is held on the current laber one way when the other the pronter declinate song lim to Shetched ord is in _ X. Marcet Described some of Mr. Bernard cafe a

64. Col Sales in the gran Wrong of wel bull observe femousing come, 15. M. Murand Foculies. In thence in an intest that Justicute Looks of bother, letter from Lagard a Rawlinina in next & bosconers auticules. He hanner remuented the applicate of plasts confee He thought that daguerrate is I celestred bodies might be feal water that miscropedu a Vierely by enlayed segued between porcess Age Prestant & tale 7. Soron retires treatmenter of themes, Rogle appointed after the Too timeta. both zin of Bruce, which but callle - Beditaling of populatil I photography celested object & they magnifying them I hope Souther that hebries a leight of opplied - or that an Equatorise movement of latreme accuracy other constructed, Questions by Murching in the luner bolomour - Evor dide of Herent of personer of lunar me I an they were 72. Sedgewick withdraws from club on thelen of whiterest health Rosle speak of his Poses of Effects of playered agent, in modifyingthe products of play Strong again shote (the leaves nots - Latter from F. Carrier " Purjant) and adam of the trieds of Punjamb. " from Fostern too. Clime 74 Si Ch Lack in a desidosis dind mer. Sabrue on Requestly by groweter, Letter firm welch & Solicit on the work in operar el Kanz. 76. Sabine brings a brush house the magnet than Hacker low Muremberg, with a little it softest 135 times to me weight Sabrie finds the hower of majuels the warried on the cales of their miles of the theory and when the property that the theory at the theory of the theory at the same also to the theory at the theory Mother in our weeth 5280 grain (16 times it weight Took on effect in relieve of Goding through a labe with a lens in it, alle nobbig the a law of I will focus is placed at one End of the tube, a fin hote function (is Qwad) at Colle calcounty - lost through the plentile at a condle those home It her like frule the See then strice are love, accompanied sometime, will black 79 - Grove ech total specimen effectively the Hole of instituted organ contented by Schoolen of Barle - Bo Forber read letter from Haggard of Churches a sextory of island of Tusen - Sylver verd occount of mud craters along the Inday ballying lesser size of a ten cap & 800 in 900 ft high gas battled of with Salt i mind Farifa communicates more from Schinbein on making energetic vy ighting opena out of oil of texpending be that had been exposed freely train a trout I Playfor said artists knew that luvhentine long exhous in half eight bottles to the said healter histories of reporting about a they sao water price to it

the trype or secreted & le lever à secretion is thopked of section of the financian news . - The de pancrecte faces defester fatty rusten , a its Existence is week It formation of health chiefe - Bowmen and he had that It Bernard had the In that then certain leder on were inflicted in brain the animal papel were loaded with toyal 51. In Parter rend a lette from Agapais on arter trois animal, Lepodox be corespo and our Aspet forms . So Not: murches in commentall a lette from Mr. Barrande of Prague who is writer on Saturan accounts a has be the first time trace the develope of a tratative 20 stages, - unforgent es trincionales It number of to called species Prof Forber states that he has been a metter discourse by a line of testing runne animal aliver without procuring fresh sea water, she simple piones the old water buchway & Throng of intervals of 6 moults on long 2 9 g Capitalized a recurrency J. Boyle red a lette live & Stooks about plant found & alexande. army a the levert Alte Garner ? he find the vegetation of Lower Scient. accountly literal the 524 May fair given an account the weent ascident with Server of wedeninde sobol be bad been overtisted. This accord bus applicant in first Kennie Hole, Monghol the Thomas were the habited draw of Londer the imburities for a very truste rates to the water W. Good nor said what had been there a recent ramoner belation to Franklin Elper Freatures intento letter from MK 4-11 of Swaiten on a remodeable well Sinf. Dichardren deverte correr of recent exper in second of he I Franklin Cal Saper these of beg bears rain in a distort flate 338.30 ade, from lange tops the fit andony 59 Formfele by In Rennie of Secontly Little of the Committee on application of In My stracture, had avere 11. On a the house belong Court sens vacant, Ante la fe : souther I walled a intersimment of Hother & Hele laken & L' Galloute be his rela the treement with Hother a School the fampally fla Club the Nichardre an nonce It Courter a feveral low fration effect by Lake Superior, but it was very Inthreall to Separate fortions of it 13 Viscolar remned in the union of Science Societies - trygestion occapional meetys - Lower timber to that of the Brut alive

I'm Referred on Requosell's afternatur for dividig a graduate therewas bereit lutie, ih hed total, been received at Kens OUT In A Mulderin in the trial of a new war steamer with wave firmather (Noy for Grupia) & Soft Muhill) 85 walled reads a letter from Gersted in while to a letter of congratuation from It obb on his 50 academic gest . Question of special demost " relater to the forth coming sales national extention I hope write & reson treams thip in acc of It health - grove welled 87 T. Bond (vistor) descriter american doguerragles of alexalic objects Put miller & Grobe short resinability of correcting for activism Quetelel (ordita) gave acc of almospheric wase, Mantamour visitor on Demallineous Ther of Sereon & Berneed 91 T. Bischoff wither , a a new metal discourt of Bergmann of Bonn like our, & could bountium Error in colortatution of revisions compounds to flint slafe in ochson believed Madanion tail that oxide of since made state Horner on brigger of balls of accommodate of read is Note valle 93 Calif Skozman (visitis) in firstioned repetition of the mensioned of an arc 1 th meridian a determination of of Heren or I level of any below. Then there and level of any below. "Well on it recent swallary of a blank & G . box constriction 94 On the fall of fish in shower with rin. no doubt of the fact deterfice Tresent actual of les Celt ochin en Irosa 95. Fabrico for doch helf theelis worl a half flag on Clauben's plan Totaler mentioned the formation of a mis musteam at Kens t Center freque perstudy Project of remove it transent of Xtet Palen & Kens referred to. 96 Surplus faul of xlit Paluce, and of on applied a interest of science on the on the survey flowery with which plant barret at bloom in Inthe Fabrica of mices word oflay again referred to apperbriate of earfle for of societies experience Tomain man of the Societies - a resolution moved a carried asky the trupot & that on the mener of carrying all the property inlas of trouter

100. Report read of fleer communicated of numbers who had been deputed to ascertain sectionests of fellows of Lunau astronom Chemical & astronom. Focules - all concurred 102 Seat of Mr. Galloway - F. Carpenter Elected 10 3. Larl of Nope be requested & lake Hips w consillation with Council of MS a with President o Conawh of the Atra location or the government as my seem most ben'not t accomplish it jux laporation of the tocketies. 104. W. marcet-communicate researcher of &? Barnard (? C. Bernard) & increme of animal heat in the Lorde in Wh: It Symposthetic herve was severed " of it more uniform character - He also shope of witheres of temperature of 105 body witing after buth - also that in their spring (1852) they had 90 consecution bags (NE wind in General & tarbine is In In Son bois Reguesas Electer-physiological lepter. 106 South fortin Stocieties again question in prosoch. Col: Eyker was nelvirological obs a ballown - L'-wrotterly mention that a familes perferation had been made ltt R.S. 15 pars ago 107 detalure on twhy baron: fall beton their when after it. or Carpentes said it bars of the menai brike had become magnetic o brittle. 108 Turklation Tim of focution; Twee facceted that forme of the more in ferland 109 hoorward Societies wouth to be represented - Col Salvie faith Sulfed her ben & Feefeet at last meety of Brit afor? - that a Quarter or monthly published was a consideration that the contain the more important scient lie haben in their count a in continenta report-asked for from To Mortler on a definite plan for Long this. no Justaporte of Stutes - It was stated that the buildry devoted to fine arts a industrial purposed who creeted at Sken tringlin and that rooms who given in same buttrig theoret sendili. 111. Societies of the desired it. a strong funion was expressed that S. Kennington with too distent a entirely masuntable.

112 Turke portion memorial I foo! for so to in a central of tration 113. Fratt of memorial read a approved. 114. Public meeting Anguested of those who had sighed It memorial 115 -. Concerten ex about hence the itared.

delter from L'Robert Hard of abertee in Justi portion of Souches L'aberteen appointes a tay (may 23° 1853) 118 Standard mertines described, that were lated prepared at Kewalso large baron tubes I inch d'unetes. Letter from hi / Nichardon, states that dient Creftell had from) on Baring Island a larce behout I him trees with gravel is mud forming considerable mound. An over the arctic islands are deallered numerous shells of extent species - The land won Justably rising 120 Le Ten of Photodelphia being for notice of the find of a jaw 1 a Surviva, near Photodelplia, polity the older remains for large replic set discovered 121. Col Sabrine shersed a bottle of glass tota an of an Ess shape, one of several from the Viterian cord new Noon Tembles at a place where hos fred currents meet. The botte had a clap stoftes. Injuries had been made both by it Nuferm a English Government but no manufactor of mundas bottles had been to revered, a none such had been employed in arctic Chestions 121. Testimonial t Lieut Bellot. h active of prosperied exploration 122 Mustralia & Sent Hang Satire so magnetic action of moon - Say the tottle, have been identify 123 as bottles used & d Norwegian fishermen a flost Bowsman on Experiments of adaptation of Exet distance, showing through the reflected images from the crystalline less that its anterior turface balges when foculed in near objects. 124. Wennse in the steam Racine in France in What Elles is well with walls bedy warmed a vaporated of the heart of the newly condented water - the thought 126 Greenfrin on the best means of crows wroter circulation the Proceedings Mt. Noc - Sharky thought it might contain reports term The bocklies Wheatstown urged brosef communications of interests facts - Carpenter cleaned what foreign numous: 127. Discolusio continued as to a Compte Trenta of the Herent forcettes erg. a long letter toon trell to Horner about gestoge, I maleira

133. Murchisch aumonneed & Leovez of trac coal for the first time in Rapin in thores of Black Sea. - Sharpy exhibited Nº21 of throceeding (March 1852) Homer aumonneed that Geolog Soc wer song that hist of recent works a memoria - lot Bortlock had helper that the Societies this cooperate to form a Scientific clue tacentary than the army.

134 Letter Leve by nurchering to Lord Naylan askein in part of Beachangean Societies that a Secretific committees mill to attached the army 135- under her command - answer declined at first, letter the able to affect for 136 Owen in Fofiil state of a specien of tiger found 70 feel lesh at Brenos agres thought it existence of this animal explained it object of the association arrange Forber read a lette from Call Shratt Inscriby the coal field see Black sea (1.33. 137. Lord Whe had heard unotherall that Goo: world africe Burlingles. Home Ett Societies. wings world headrably have the bath. I'Make describe faiture of application of photography bastron omical purposes the Motion was left Least him than the legs. Some ingenerous michantens coalistances had been made to abjust to plate, - also an a new brock I to boering glot tarfaces for merries, throng the tother in our piece 1 oleh o transferig it tanothe precis - Ir realism en & the power of hastography & represent vez minute betails. It Carpentes had been misroscolic pholyraphs made under to the wid object clase - He also shole Which It may was split a which sit is not forced a gran ago in anceron in which It may was split a which sit is the forcest or the recent one of Naches which his swants this 3 prisons were seed one & split the ray a one & send it up the book of wither cyclube. Col . Sykes described a plan of Scherlering Aperforated Juken of Jacquands loom by a dram a sledning 141 Contects

144 Cot Syles read letter from the Schlagen twestor in team fire death of Mediterrakean - spee: gr: willeter come Cartherines - obstemberine in means of bringing in water from ment defelles - Six Protega Canther clescritered anywhereriz of Ganger canal is the way of carrying torrents over to.

1450 of six king from datains - Cot Portlock in the footis freetim of Sebreddfield 146. Isher lever of dicity between plants from freenland were explicitled to bernaght by Cope Redchers lapled - probably of tertians though were from from had seen a medal of the new metal aluminism, larger than a half crown, thought at Paris

147. Twhored alteretion in tales of Election 148 J' Playtain asled t- what an Jugoch of accordifice withinments to boar thanis Colo. 8. - L'wrollesty hait much provoch had been made, the Port has given \$500 toward percury them 149. J. Maghair explained a new French burch Vireserois vegelables by Verbre and carried ord by Mufin a Chotel-, by blowing takerhealed Hearn through them which are then comprehed & Tited. Rations of these to 40.000 men had been ordered & lood to Crimen. Unkleunde mentioned a felin to mefel de la Best & Barnet tor heckering meat & estrating 50 4 60 per cent flowetes in immersy it in platine prepared from the boner of the animal - & Fons of there raw a 1 tim of cooked meet houseroed in the plan had been ordered to the Crimen - Mr Expert extent a a dinner fork covered with Litica teporated & the Coloran's hercef Me from the on aluminium wateren as possibility untentant là Vollate Juntones, I Playfais of colonie hous' it color of cold a if it had a liferent allother State of moral less traplaces 9th for electorty him 150 J. Bence fores read letter from Jubon Ragums on following new event - Bude on motion It tris - Leneme has been made fine its clements in Wöhlers laboration also some all falty acids, a were about to make artificial tallow. Boroll in the intestined willing warner on the roots Mt Abrual serves denied & Ludwood. Resolution encerus, election of members 151. J. miller son alcohol has weent ben made ten Stefrait gas. Whentstom Lays Faredy had bene this many years ago. 2 proceders were now reporter, in by Bertheld. Letter from Copt ling read states that some remains of Levelened & parts had been found. Tropotal of fing cans & a Runkorfs cost; it was qual 152 applicable & Sabruarine Jurpores - Du Bois Raymond on cellulore with haman brain - Paker manufactury to be established at wolllewish to make cartibles from a cylindrical case of hulf, the difficult of 153 facking with scenary made it undanstable E have them tent lion aberdeen her they were manufactured. 154. Rule hoped referring & time of Stection prembers

155. In M. mardoton had been with Priva albest in salyich of jux/atorit of societies. Il apleaned that may tradetinea desired Barby law House to It M. acidemy, S. Kensylin heiz too dittout - a committee the converge 156. In J. Rochwelson stood that the Eskimos of the XI shore of america had to the first time inceeded in ascending the Mackengie in sport of 157 the Intrain & communicated drutty with the Harran Bay Fort is the Veel river - Referred & bones of a mastoria friend west if Lake winnester in lat 52°. 158. Fastaposition of Socielets - interviews with munisters venverselin. 159 W. Grove spoke of Seachin observations of Salurion's rings with a telescope that bore lovo magnity power 160 L'wrotterly said Mr. Who twell had mounted a new 15 wil object state. Hirsley described Rolletinis experiment with Sperawtozon after application of water which stopped them, sagar quen neutril Sall be caused the motion the revived. Caustic alkalis protoned to movement, acros kolled them. - the Schlogentwest had reached Calculla. W. Horner assurenced progress in Egyptim 11/1 excavalinis, 72 potahad been fack - Pottery had been facial 48 feel below the Enface. That was 40 feel below the level of the Hatue Shool according & Lepsin was breated 3200 years ago Turtation time of Societies. Land wrotterly had Seen L'almeration. 1/2 Justahoutin, prograp whostert - Bence lover said that 1/3 Fardday had discovered that nockel when heated games magnetic hower M. Calinos dixcovered that ammina & Phot phrutted by Nore 1 his have strong analogies . He answered questions about manufacture if aluminum. Nemaskable tomado in U. States on april 30/52 the certific was I must broad a on little tribe of it no virtual winds 165 het inthe had trees were overthems at it rate of 7000 per minulo Hart Stones weighing /4 to 166. goot has placed \$1000 at the Ishoral of It R. Soc. Sutta hercha diferenced in the freminala of India. W. love. in most of election members - disculin Hos great unde. - seen his wife's gowns when airing thester I wise sown in the item of the Belloon. Securiting 12 Securities have a crowners in Coliston.

165 Startiz from montyothers ideas he calculated in 1839 th nechanical quivalers I heat. His formers were wrong & calcular but own the lover happened not to differ much from boute's 8- milles Franks application of the Egroscope which comes 6 und below a magnel or when forcetly coursed two lon vises is lent: is a convincing proof of conversion of motion of theat.

169. Shetun t-club ditaffin continued. 170. furglu porter 1 touties, again spoken about

might forward stand to ferritable societies the be more muster - their laborer wars concentrated to more important memoris concentrate 17 Question first brought forms Committee to report thereon 20 Report of poplation ten recommended that for and of the asked - much by culpin them - 21 Bricafini - a general calalogue perferred. 25 28 disculsion a abjunctment Sophological afternite of President of Royal Summer Geolog. astron Chem a Roya awate to back afternite Goals 29 Proposed reporter - no delast, 46 - 63 CHE requested to meet forthwat y terremained with President, of the fourter a to report rebulli Clab 63 Laggestion of occasion western (the take of the Mant: afers) in Lower - CHE applicate I caniber 65 disconferent of land alle exports favorably - detenture therese rather adverse. × 96 Suggestion that hard of susplus from of Clayeland Blace middle block to brut a natural such that Sciences The Prevident of Socheta had and their fromable to above plan and to movery to fire Home as inglested than re approximant of communities of President. . That class to Africand, nominated to consider teport. Report butmillet. . referred to the Linnocen Redolected Chemical . association occasion 97 × 98 1100. Neporto favorably received & all it above - Thereal Clies appended by good next flifes. Recommendate of the CHE adoller that the documents be intrested to Early What with a recent that be will ack thereon in conveil atom with comment 185. Fred interment of other forcester or the Covernment. 103 106 Reporter that It Comment BS now had the habited under Consideration Statement that provincial societies wenter to join at the ja xtation ten scheme that retempt also in question of contractions scientific feets calcing. Report to Coro intended to bailed at S. Kensing in a Kaprosom with quite the Scienti Societies of Letical - it as constant that Kensington would be cathered unanciable to the fundament. 108 110 AI Memorial to Covern A Low heepered. 112 */13 Dat memorial tentrutted a approved asking to some central vonvenint frontin Suggestive that a public meetic be convered 115 Chest draw of a circular & memoralists for a meeting, to the a debulation (for 115 12 9 Present comple sente a wiler circulation of Prove: My Tox L'e Nope, bar abblies this is notetwork, who unotherall totalin the good intend there oblight is Burling 137 his to Marchine had seen Prince albert who sympatheries but tooil the Buyley to troop would be goodly touther for the North academy of the test of the standard of the Color of the A there I there will be destined to describe the test of the commenced of the test of the 155 . 158 L'Elevortiste, and seen Il Palmenter a war afined that us deliantification was before the Goo! . 161 L'wrotterly believes that it is bettled that afestment are the fiver to Varling to House 162 169 Lewwellerly had written but not get heard definited from L= Palmertin Reportative what that as information had been received at the other of works. I wrotester wrote the Treasure of the street had been occupied by the Landa Universit. The words seen assured as a representation were much to chapter 171 Proceedings as pursual . notion of me Herwood in Home of Commons. 176a Evological Society, is reference to Barbayten Honey, Taccomodulin at 197 . 225 action of lov. report is respect to unwerent of London - various diminis expensed. GALTON (he farther allersion lot befret - the minutes) PAPERS. 13.

berter to 161 agasiz. a. 519 Ellist 372 415 alexander 217 Petral 329 Peince 379 Vertz /52 125- 234 Fick how the 403 Phenlamor SI.90 6 Plucker 281 Bush 57/196 Busher 58/200 328 Bisch III 51/90 nerthed 386a Quilty 307 Queletel /51 85 13m2 51/85 aurily 307 Hagne 385 Helmhotz 308 Hothstelles/57 193 Hodgen 301 Brandis 51/90 Brown Seguer 58/213.243 hepley 364 Cahoro 55 162 Capanisaro 397 Cook 373 Corner 370 392 Crawford 231 Jansen 386 Rutherfur 538 Cupey Viconte de /55 158 Unknown 277 Gernak 294 Kölliker 404 Kowalefski 387 Van Banchen 511 Vernequel 335 384 Dally 359 Langberg 147-14 384 Legard 55/ 119.281 Legard 150-13 416 De la Nive /49. 48 Bespretz /56 179 Schlangweits 150.78 Skephand 155 1615 Scomens tot. 415 Skosman 151-92 Broker 549 Bu Bois Naymon / 155. 152-/55. 154 Wartman 511 marcet /52-104 \$2/143 Wenlock 35% Sanglison 154 137 Seiven Barrai 52 97 michael 427 Warts 279 Strelecki Com 316 mandin /59 224 Young 384 neftel 272 Nrander 549

bitition		file
BLangbery June 17/47 14.	Muckey June /62	281
· Se la Nive may 24/49-48	Sea gr June /62	
Lowell W. June 150 - 73	Czernak Mag/63	294
Schlagentineit nept. Dec/50 78	Quinley V. Jan/64	
Unclited Part. may 157 86	Helmholtz mar 164	305
Bond Prof may 51 86	Hodgon W. June/64	3//
Plantamoner ,	Cook of Oct/64	313
Brandis June 19/57.90 Bisket	Strzelecki Coul Nov/64	316
Bishof \	Belavenets Cafe! Nov /65	
Skogman Oct/57,92	Pebal Sec/65	329
Barow i Dieven Lan/52 99	Verneuil June/66	335-
Marcel V. nag 27 / 52 104	Wewlock Prof Dec/ 67	351
Ville my 26/53 116	Vally Nos/60	359
Lea D. Oct/53 119	Hilgary may/69	364
Penty J. July 125	nepley \	
Junglison May 54 137	Comu Legao	370
Marcel 8: Oct/54 143	Elliot D.G. min / 70	372
Du Bois Raymond april/55 152	Peirce " oct /70	379
hay 55 154	Verreaux Dec/70	324
Vicante d Capex may 155-158	Langley / Jan/71	384
Dersted) 0 1 1/1.	young)	
Shephand \ lane/55- 161	Hague 20/71	385
Cahours Ock/55 162	Jansen mai/71	386
Geofretz may 156 179	Bertholot april/11	386 a
Hochsteller Mard/57 193	Konvalefski Got/71	317
Barth Mag 157 196	Corner Sel/72	392
F. Becker Mar/58 208	Cannizaro May/72	397
Brown Jegnard May 158 213	Fremenertle 20173	403
alexander Prof Oct/58 217	Kölliker y mar/73	404
naudin 20/59 224	Fick \	
Crawford Cept: May 159 231	Mayer > lune/7	3 400
Perthes June/59 234	Capanema	
Brown Jaguard Mar/60 243	Sceners V. W > Feb/70	4 415
Neftel 5. Dec/6, 272	Mey Sen Col.	
3? maz/62 277.	Elliot	
Acce	Leland mar/7	4 416
wortz 3 maylor 279		75 427
	1	1

War Muan May 176 571

Van Beneden May 176 571

Agagis a. Jan 177 579

Menabren Count Der 177 530

Rutherfurd June 170 538

Niandet June 179 549

Draker 5.4

Inderety her bired; brought better It M. Club when it formalin a would 1800 the United when the Comment of Whiter

GALTON TO PAPERS OF

Abbertle flint implement, see Amiens &
Aluminium 146 164; not difficated &
Amiens Hint implement; 237, 245, 247, 294, 301
Amphiopus 336
Ants, white ravage at S'Helena 538
Afres at Gibrallar 522
Arc of meridian Baltic & Polar Sea, 93
Arolic vegetation in Miocene period 399
Arrian's account of assistic plants 53
Arsenic in rivis water 371 in type musling 527, 528.
Apyrian Sculpture photos 1 66
Attendances of members 510
Australian expedit for thang 122. M. Slewart Australian expedition of the Sea 258
Austrian Novara expedit 198. 206

Brain of Mr. Babbage 337 Sasphers & Para meles yiran Het Balo & Challer Sicher

Barer expeditation 210 326 Balloon history of montgolphen discovery 167 " meteor of5" in 106, 277, 304 Baring Island, duft wood 200 those Sea 119 Barmeter Geneva . P. Bernard 90 " restor of fall before rain 107 " great heart in dec 1865, 330-1 Barmetric waves 88. Bathometer 505 Bermuda flora 409 Birds Amall established in America 415 n Crania of 343 Besmith, magnetic perperties of 48 Box swallowing a blanket . 94 Bor-ethyl 250 Bottles Mange doubted on Siberian Court 121

" explanation of 123

Baker



f12v

Branchial filmen undored in man 516

Brain of Babbage 387

" of Dasyhers & Parameles 321

Bridge swinging, at Newcarlle 417

Buends agres foful times bones of species of light
Butznic acid, artificial 319

Coesium 264

Calculatur machine 143

Calcium, populli are of, 149

Cameroon Mo proposed explor: 190

Cartridges manufacture of paper of 153

Caltte flies of Abylanici 70

Captte plague commutation 327 7 344

Caves. Scoth there 214, 216, 219

Socioque 311

Gabrallar 30, 31, 313, 317, 324, 521

Sicily 233 234 248

Certagrade deale 9
Centralistation of Scientific bocillies, was discapied at 32 meetings; see pages

7, 20, 21 25 28 29 46 61 63 65 96 97 98 100 103 106 108 110 112 113 114 115 137 155, 158

161 162 169 171 176a 197 225 (Kermore infertant are marked with a x)

Question first brought forward 17; Other recommend jury laportation & Somerset House 21;

appoint president of Roy: Lines Good: astor Chem: & R. Assistics socia as a deputition to Good 29;

French, as a boom unwilling to go to Gove House 97. Reference to members of Line: Good: Chem:

aw artir: Soci & circular 98; Raplies kanded to Sard of Notpe to before central a convenient with council 185 & Press C. of the other for: 103; House memorial for some central a convenient Situation 113 - L. Potter applies to Sin W. Moterworld 137; Sin 18 marchism to Preside Albert 155 (compare 158); L. Wrotterley lees L. Palmerston 161. Burlington House applicant settled 162. Much doubt, the University of London are located there 171. actum of Sooi in respect to landows of Lines for the selection of the sound of the selection of London are located there 171. actum of Sooi in respect to landows of Lines for the selection of Sooi in respect to landows of London are located there 171. actum of Sooi in respect to landows of Lines of London are located there 171. actum of Sooi.

Challener exhedition 423 Claupens word of flax fabrics 95 97 Club first constituted . 7

Lee Rules - Vinner har

Coal Papigner of Black See 133, 136

" in Nizamis dominims 425

Cold, in Jan 1869 - 339

Commission on Scientific ands 378

Compared portraits 536

Copper to Late Superior 62

Corks of bottles perforated to insects 66

Corona 391 (see eclipse)

Corumbum artificial 525

Crimban expedition request that a networked be appointed 134 135

Crimbal 336 355

Crystal Palace Insplies fund 96

Cunciform inscript four deapherings of 198

Sans winter temperature 417
Sead sea personal t level to 316 319
Secenal scale 10
Siamond artificial (see Horse) 555, 558,560.
Sunner han of Club from 5/2 to 6, 223; to 6/2, 510
Sindinis 74
Sisco fotoil plants 146
Switzing instrument of Kew 82
Sonarium (metal) 91
Sordogne caves 311
Stainage of London 54
Servera 260



Echipha i New Gunieur 5717 Schiphe 252, 350, 353 355

Earth once liquid, Evidences of 24 Earthquake in Italy 207 209 East wind, 90 consecution days at Seneva in 1857.

Echidra in New Guinea 517 Eclipse 252 380 353 385

Eland as batchen meet 357 Electric of members, in rules to, 147,

150, 154, 167, 169, 171, 178, 180, 195 Electrity applied & firing guns 151

1 muscular 49, 105, 181

Electric batters (Japaist) 284, 319, 323
Electricate dipopating platinum in in Vacuum liter 540
Electrodes heat of 265

Electro dynamic machine size of wire 535

Elephant higny . 325 guerald in rocks 544 202000 Canadense 332, 334, 341.

Esuator Ellepticity of 338

Elina 218 Ston physical Science at 42. Is kimo Vorte up Mackingie R. 157 Sycalation of buried city near Indus 186 Explorion chells (water charge) 517

Faraday, letter appointing him to R Isst: 290
Fermentation 264
Ferms foldil, in New Zealand 311
Fish falling in rain showers 94
Flint implement at Amiens 237, 245, 247
at the New Zealand 346

Fluorescence in living tifsue 326
Foramenifera in Greensand 193
Franklin Benj: letters in early
history of Roy: Soc: 11
Franklin Sin J. Soc: 55

Gale 256 see Tormado
Galvanemella 187
Ganger Canal 144
Glaciero (see moraine) 187, 219, 312
Globigerina 0032 423-4
Government grant of £1000 160
Graphite near the Yenefrei '281
un (armstrong) 220-1
... firing by sheeterty 157

Harvey letter by 501
Haywardsephed E Pamir 370
Heat obscure, 315 incandercenaly 324
Himalyas heights in 31, 46
Hygrometry 64, 74

Ice physical properties 187 191, regelation of 242
Indiam (metal) 390
Industrial Education 93
Inoculation with dilute virus 327
Ireland a Spain ancient land connection 48
Iron in varlway structures 59
"Slongated by magnetism 409
p.



Jacquerd cards replaced by telegraphic arssingment 142

Japanese hictorial story books 549

Jerusalem exploration 316

Jupiter 12 1870, 369

Juxta portion of societies see centralization

Kew gardens, museum of protects 96
Kew observatory 75, 82; slandered
weights be 118. application to
from the Pope 200
Kidney, the color of in life 312
Kilimanjaro 392

Laker, green color of 188

Lebanon moraines 25%

Lepidosvien 373

Lepidosvien 373

Lind wind guage 207

Linnocan Society, meeting on sume

night is Royal 192

Lithium rapid absorption of in body 318,320.

Livingstone expeditions 205,239,307,318,400.

Lunar volcanoes 70 73 (see morn)

Madeira gestogy 1 129
Magnet Small & howerful 76,78.
Magnetic action 1 moon 122
(Mars in 1878, 530
Marocco exterition & 386
Marocco exterition & 386
Megalosaurus 347
menterranean temp & 4.9r: 144.
Currents 389 393 398

menai brida, ban magnetic and mental imagery 554 Meteor 55 + 383 Meteorological publimine India 43 Metrical typem 10, 14 Minute book the first presented & W. Expert , the second & Sis Wa Grove 558. Missospoke bruscular 140, 292, 344, 349. Microscopia Section 556 Moero island gestory of 79 m+Blanc 202, 230. mom criters 70,73. heat of 182 26g .. magnetic action of 122. Signs of moraries in Lebanon 254, South Scotland 302, New Zealand 303. Mud crates on bank of Intus So Murex dye, photographic properties of 244 muscular force, Effect on galvometer 49,105,181.

Natural history Collection, releating at Bloomsbury 217, 241, 249, 301
Nature-printing of leaves be 180
Nerves special to nuncular Seale 243
New Eminen (Lawrin book) 500
Niagara 403
Nickel magnetic 163
Nite valley Secular accumulation
of mud in 92, 160, 203
Number-forms is mental imagery 554



0.15V

Optical determination of strain in static bookies and, in viscom bookies 413 Optical object of a very near object and leas held beyond it 16 ... I looking through a later with a leas after subbig theology of ... illustran with colored challer is a diagram board 386.a. Ooa fertilised & not, offect in her operations in the Sun 549 Opgen in the Sun 549 Opgen in the Sun 549 ... Opgen in the Sun 549 ... Opgen in the Sun 549 ... Opgen in the Sun 569 ... Opgen in the Sun 56

Cancreatic fuice action of 50 Paris exhibition, instruments for 148 Poposii 266 Peanciller Cell 410 412 428 Pepsin 266 Petroleum lamp 293 Photography of member of club 20 Photography of teleschir miges by nebulse 70. astronom: purposes in america 87. by Lord Notse 138. microscopic 140. A ordnance maps 180, other documents 246 249 of sun shot 212 mitiling squatement 272 Myriol: Heremens 272 various ottes hurhores 273, 350, applied & lithography 285-Wranium and in 225 platerium prints 5h of color hotoroupy 3/2 Photograph; plate printed by contact in bark 225 Photocraphic properties of skin of bront 201 of murex dee 24

Photometry 280

Plane Surface 412

Planitary movements 329

Manimeter accuracy of 420

Plumb line deviation at Coro Hythe 308

at Porteen 317

Polizoury 264 Priestley letters on Early history of the Roz: Soc: 11 Proceedings of Rox Soc: improvements in publication of 126, 133, 504 Purbook fofoil mammalia 189

Radrometer 511 512 a Rain tinged black, 275 Relief fund (see Rolfs) 227, 228, 230, 232. Mesearch, endowment of 402 Respiratisi measurement / products 337 Meximous compounds to replace fliat glap in achrometic tetercoles 91 Retirement of members 334 Neversal of spectral bands 393,395 Thinoce sos discection of 57 Richards mis arctic likes " 56 Rocking Stones Experit Mustin 35% Rolf's fund 220, 224 (see also relief fair) Nozal Societ annual number elected to 377 381. mode of electing privileded persons 404-6. alte. - ration of hour of meeting 553



Ruby (see stones)
Ruby (see stones)
Rules original of club 4. inter- prelation of Nule 9. 502 523,
discopin on 541. perpond alteration
543, amended 546

St James Hall for Club Junier 267 Sand cutting stones 363, trees 583 Sandstones of Elgin 347 Sarcole cord of Conatula 348 352 Saturn's rings 159, 271 Spectrum of 324 Science in school 42, 420 School of detica 96 Sea. Soundrags 257, 366. temp: 421 Sea water freezing of 375. sea walk Deafor agains 53 Sen derfent 32, 35. Sebasto hot heratims before 145 Seeds vitality of in great cold 420 Serapir limple of its height above to 270 Sewer at Westminster accident 54 Ship (steam) built in wave principle 82 " For laying Electric cable 416 Silicon deposited & Electrotyte 149 Silurus Electricus 204 Silvered glass to telescope murriers 139 Steman's expedit Fije 241 Skull (? of Engisthel') 26g Sound propagation / 411, reflected by flame 415 Shalino welle concelles ago. Spain natural hist of seas at accept 47 accept 47

Spectroscope 252 293 Spectrum solar at various heozati 278 reversal of 393, 395. Oxygen in the tan 549 Speke expedition 239 Spermatazoa 160 Spheroidal condition of liquids 212 Spirifer Cuspidalies 345 Splenic fever protophyte 532, 533. Sportaneous generation 251 Stamp old noman for collyrium 551 Statutical section of Brit afroc 514, 575 Steam Engine, Ether as well as walter, 124 Steel by Uchatuis process 182 Stones precions, artificial 525-6-8 Strychnine, no Effect in acari be 271 Subscription & Chil o dinners 201 Sugar secreted & the liver 50, by kitneys after train lesion 50 Supernumerary membership 27 Sympathetic nerve Effect of Culting 104

Ten grown in Himalya 12, 95

" plants from China 73

Teeth artificially swallowed) 271

Telegraphy Junched paper 220

Telegraph Submarine whre cut y

le a saw fish 502.

Temperature increased & section of

Sympathetic nerve 104. of foot

reduced after dividing the lento

achillis 227 - increased attendents.



Temperature deep-sen 421 " love in america in 1859. 223 Thanks tubrong 366 Tiger of mantchurin 414 Timbudio 197 Toshalda in US State P647 That she woven to clay meeting 201 Ti pue woven by insects in hold En of ship 357-9. Tonque excised without destroying articulation 368 Tornado in U States 164 Fransfusion of blood 213 Triconometric Survey completed 273 .. ets union with those of other natures 273 Milobita 52 Front photographic properties of skin 201 " it's temperature when alive 206 Tselze fly 206 Troy a visit to 399 Tube blowing through against a flat surface & attracting it 44 Turpentine exposed to June air its effect 81.

Uranum glap to vacuum lubes 375

Vacua electric discharge in 317
Vegelatiles preserved 149
Vegelation Suddensch of in India 96
Velocity of shot, measurement 361
Vesuvius 218
Visitors & Club see list at sud of Index

Watch rate according to melhood of
Sushenhon 341
Water, in explosion shells 518
Water shouli 427
Weather charts 420
Wellwitschia 286
Wrie Size for Electro dynamic
machines 535
Wood petrofied with silver in
the fores 534
" with hoof of animal is of 535wood aw flax fabrics 95-99

Genesee river graphit near 281

Visitors to the Club

agasiz a. 519 alexander 196 Barth Becker 208 328 Belavenet Bertholot 386 a Bischoff go Bond Brandis 90 Brown Seguard 213, 243 Cahors Cannizaro 397 Capanema 408 Cook 313 Comi 370, 392 Crawford 231



Cuper Viscomte de	158
Czernak	294
Dally	359
De La Rive	48
Despretz-	179
gooe a	279
graper ?	549
De Bois Raymond	152 154
Dunglison	137
Düben Baron V	97
Ellist-	372 415
Fick	404
Fremeworlle	403
Haque	385
Helmholtz	
	308
Hilgars	364
Hochstetter	193
Hodgson	371
Jansen	386
Kolliker	404
Kowalefski	387
Langberg	14
Langley	384
Langley Lea D.	119, 281
Leland	416
Lorvell	
1.	73
	8. 104 143
Thager	400
Menabren Court	530
Meydam	415
Michel	427
Nandin	224
heflet.	272
Niandel	549
Oersleil	161
Pebal	
Perrie	329
1010	379

£13

Perli 125 231	,
Plantamour	
***	281
Plicher	86
Queleter	
Quintly	307
Ruinley Repley Rutherfurd	364
	538
Schagentwest meh	5 78
Shephard	161
Siemens W.	415
Skogman	92
Strzelecki	316
Van Beneden	511
Verneuil	335-
Verreamy	384
Ville	116
Wartman	511
Wenlock	357
Wartz-	279
young.	384
h. I	

I name left black in f. 277



Jan 2. Homen. Eva just distinguistes I find when tide of branch in 9 mm at 11 yards while paper on it gray excer of the book Fig does so at le yards Tog bringle of 25 mm is side at 30 gards to appoint of a side the lower test Harsan I think july, 25 mm at 50 gards Cound fee 20 " Sees 20 m well at 35 MB. J. M. Same as Hassan 12 - 12 12 20 mon al 35

Cairo Fel La Jos Magazina wighting A working creek the soferalited the Rofmon and the Solidarily constituted energy of animals the Rendiness & left sacrifice Scorsionnes of It Krenos less much in their like a father when is her obstance i then I montach Necessity & creature action blow Paristicism & Enthusian, Faith separation, Faith with light Patriotion Which agethe best stops two on in the human organine? Variet of Stheral ideals , Fear of death

Solidarit of the Kotmos & 2. Theoremice & reporter or wall flower Shape a Jelenam sid i vacaum light gravity surbit a unegelin Solids martine keep out the the their moto can head out the season steels Hereby Headed windralities of but few ancestral stems Contervation of Energy a Katabolism Countered charges they made ounters of fite monitor Meny modern thought are forcilly expressed a blibble language with being familiar we suit not thereby deriving authority by smith reaches for & in unloved to directions, sometimes for forward Instruct effects of soing new art of parliament Front operate will this - one thing destroyed andles explaces it though sad be correlated with such, the rider of correlation in ofthe infinity small tolere terman aging trones in the origins are numerous a wide back who prosper the tree the time have long historial ancestries This is the house that Jose built Therented energy famewal, compleredly of funder, toconotion Quote Farrion no my con how weathers animal by with heldered mil Talie offect of anvisonment on organism

Kind wiel a self sacrologice an fiespler honor the man who works to other . Remple pleases a reasoniblided not a crank. He was loosed his own life Alvall fried it We claim of "all others prester that then I self; of one other is not, " where is Detachment from Self; tooling on as a comment of a force (whird oneself is a unit. Shill an occasional mood only. A) line page 2. The world, self is not it final en just x in makes it to prother oblides);

meening a free will Freed my will in the obje popular leade, in (+ my inconcervable) I cannot understand while without wither a acting by itself, that in quite medical of motion, environment a character, next can I fecture the market of the character of the character with were so for conditional as & be always wall, and infortant introidually, take on I sent the out, in the aggregate, some influences most offer neutralities me another more or less to continuel a bala is all degrees between equality and the complete preminence of one dark over auditor, then we may be neutralisation would be expressed by the residence of many of the Low of frequency, in some lively severa which is now I now glow think is bearing familias. But the suffered and him los not expert on since act of the supposed will might consider an exercise destroy a overmenter course the previous acts, and a Charge without any concernable invisioning would result . Late Looke at Statisting one fail of Died a chaos whether in time or share would give us also to what often parts would be like there might be redord here is contracted there which would give notified by contraction of what you arother fast. Neither was to the freedom of will concertain to the contraction of the co toute to powerful as to decree that are touferfullitus to as , as that twice leve that hercefort begins and for , and it like .

may entitly it sur but of The phrace of a self creater best is a form front's llatitude willend my intelligible mercing this, we are so our music are so destroyed that it is repossible to imagine the ask of self wealon when we altered by end what may ratify the the but not the recon Here we are; how to a bust term, but no one has been able to give a rational & hustworthy questing of the give, when while? blacker be beter we were born ! Who are welcolled at being? what I could ! er after in the ? Shippe we readsorted with the great whole out of affirmed that seems pleased to as first wish and which the hour of difficulty and the form the formal to the first the formal to the first the formal to the first the formal of difficulty and the first the formal of difficulty and the first the formal of difficulty and the first the fi about answers to there three elementary questions. Our professed quides are ignorate minter blocked really ignorant

Some working will not lead a might of face deroth of many freshoots definite roleto some first one for leave a the server of the server for the server of th Sexual passion septe Before I home quoto Ber a couse or a flag a maiter farming to a maid Love of July ren if relations, family attachments 13 or ancestral home topre Hastery 1 7.6. The folial action of A Hanney finely pride, Megatimocy. 8 Fushion N: for fold part due to the solitaring theast, and should brill any page of the fold of the solitaring the solitaries and solitaring the solitarin 17 Duty Rome German Sing 13 ariehold Sour of house of menorine material well been sunt towns 12 days order, to hower (Stanley view) and town there have the sound from the formal for 12 days order, + Religious appoles in Later - Nelycom War of w persecution 14 Storcism she of the sublime it cales, myste called dates Money gettinging, intrigue, haggling our a bargain

Meaning of meditioning, intrigue, haggling our a bargain

23 At Aevenger a meditioned (muhicious milines) jealoity, toucher

25 Kacial antipathy (personal pito) Brieffelin - Kind iness philanthropy charite Marae of Presson, tolifical liberty, + Restlemen 11 Above for sontwees It's works. A balkle 4 of hundres atteletic affort of excelences Sculler purbute apolimetes other interests.

The strength of one motive may be fulled against about any one other and so the order of their nation trace may be a secretarial - presety against a non-incolor Sometimes one as possesses It opened that the other are wealoused as expectally in 11) In the notice munds the larger motives are more frequently engaged; in ignition gained they delorm come intraction "It whom all hearts are then, all derives known The Tuling pas nonan abiding senses I so face so the interests of the colouring by dear here willed considerable in branches of an a sonominator of strong of very showing a restificient is overmathered, estimating fishely it intents to. thins - 4x > 204 a 400 7 300 a 4X 2013 A jud perceft of Blam Z mangioner (11)X >(1)C So intentity of temptation & for A & Z a finding native me be present in consciousned by the total recognises latent to indefine amount = > total = M+X Sheall A, median M, great Z interposable X The order of presidence of molivies with frequency of their respective intensities

In Each men is a End nation walls state thould their rolaters cogency might be object mean motions will not show them a men to brace red calamity and any generally then others. I Sequel passion suiverth in yould "- a maider passion for a maid" 2 Love of children a family of 3 Philantheopy, charity, and desortion to other friendship A Loyally to a person (Garaballe) If Patriolism (France Japan) . Frother to come & . 6 Religious profession was perties of its touth have , 7 Caste social position, family pride . 8 There Grandy; fashin on dress, of each, democravin; fishalar suthuniarms 9 Gregories info, four of death (partly due to the solutainers of death) 10 Hour, dueling libts 11 Duty 12 doce dilay and order justice, right 13 Home - referre, beisne, memories "sustained magnit", "percept may in 14 thre reverence, mystic contemplation, self-mortification

ambilion power (Stanley) bise of appliance, precedence, decorations, titles Freedom (Artitical) love of adventure (Mysses found, and research application, general restlessness of surveys 175 Science, literature and art, hobbins generally, metaphysic Study + 19 greed money getting 1 20 Intrique, diplomacy, bargaining * 22 Untipathy ricial * personal Revenge , jealous, evoy, frique Hearty conception of the immanence of Soly. & Memories of fact detail Fred Burn Bern Lay C There I delacted from first & falin E Faterer delader) hopes. T Ladefunt is respect to limber

In murrays Hand book South there is a vocabulary of some 1800 words, in never them the first half of it I only town x false severas Grof lotal 12 of which 3 are 6th fourt agreement clour x converse tidle x lass durly > disgnal In Italia dict \$ 1-217 hel count 100 worth in fresh Act 20000

Monte motions s attallment 1 baseness . althor. amisble abstencial americans altertion + bashful abstenced anurement acremosions, angels - 4 attrostion bearthress · and faits I beatiliste active antificher , austersity , beautifut beaute M s autochet. befool adulation of anyfely advanturew. populary of , averice , beggar. affability. applause , acete d'behaviour · avertion / belief affellin a aptitude affine arden avoidace & benefitance , and I benevosence affliction anstocrat beganing hily Massford in arrostise after taste art writte Backbiter , beseech Oal belothal aggrandrungil arthurers aggregación y assertion fi balatal bewitchment aitment assiducts, bamboogle bias alufon sessistance I banter bigotry x alloquest association barbarous bitterness " bland Cohment aller frent , assumption barefaced amatereup & artmerhinal & bargain bliss ambition & latherite barder blander

boastful h bufformery , Capacity thank o Chouse Co. bullyt caprise Changeable of chuckle or bolifus, bumptions + captions & Chaotic church - wh. bombart buoyancy - Captibity Character circumspect c boorsch, charge circumvest o burkensone Ware carely bureaucrat & carbial burlesque + caronse bother charings artisty M & bouncer charitale to I claim bounder business M Castigations chargher * Claneolous V Castrote bountous bury body Vs clean My & charg boyst butching to Calabeling Chase O, Work bragf- garding charlity 1 clemency & Cantion () Dainsick Chokler Cavilly chartisagut , cleverness Mo Mbraufito -e, chent c Cajoloty , Celibra , close Praifles Centhions cheerful Calamity 1 clownish churish Calculation O dolog breed Centure bribery C Calmness 1. cerembrious Chicardry Coarse brickhief Caturation, control anton chafe f chief i colx · Candid anton Chafferero Corty chilly Cart v y Chagrin Chi Calry coercion 6 brotherly Cantanterens & Challetge Chrise cogency brutality champion. cholera . Cogitation

Coloness competence , considerate a contiguely , and brained Collision Compunction & Constation + Convenient Craftiness Colletive c Concealment in Conspicuous Convestional o Crafen Combativefol Concepte-april Conspiratore Convibral raginess o Courtly concentrate constancy la coolness L creative Comfort of Concern & Constfaint , Cogletry creptable o credulity 1 comic & Conciliation . Contaminating Contillity crestfallen. commund & concold . Contest tour commend of conclinence contemplating corrupt c crime c Commiserate - Contemnations Contestat & coses v & crifge & Commodious Confescence of content Mx costly carpete Commonner Contolegue + conteftions Counterfeite Critical Company of Confession or Contest . Counterfor . Crossy compositants confidence (contibences courage & crust M compelf conflict contract constitues eye crusade compensate of congestial contradictory covetons of crusty competence o congruity contrition is consperice a cry confident M. Connivence & Contriver Cox combig a Cudble Compleisant & Constitute Control & confines & Culpatitity o complished congrer + controversy & cozener c Culture contampacy crabbed cunning is complement of Conscience o

f-10v

Strong Such as soon prompt save ments face death

Strong such as save men have on many material given convey to face death

The Steam fuercure — leagh a loss intentity

Medium | Wike love of order

and remains
Aggressian & hobrissiae trance of mind. + n - Energy with restrict to toccare

darray surrender of the both true terms

metter fundate to the freignaline

senting to the fining of the senting of the senti

f.11/r mulation. acarkal GALTON PAPERS NO boer

cupidity is dazete defeat x demoniar destatel Mcuriotity or deaden defection of demoralise of despond for Curmidgeon deafness M deferte demibrenes derft x cursish death M defiafre denounce of desting of cursed debate s deficient deny of a destitute of Custom or debluck defrand c. dependence f destraction , Cyrsic debtity deflore ox destillory or debt a degeneracy deportments detection or dainty 1. decadence o degrade 4 depravity c detenerate dalliance a deceit ex derfy depreciate of detest a damage decort & dejection depopulate deliber. damn i decide-sing delay is depression + detrimental Mance destain delectable derision of devolute Manger o decoration deliberation desecrate i deviate w dangler decisions delicacy of desertions devilet in Mdaring a decloy a delightful v deservetly on devicous darkenne dedicate delinguent desire-Alle devotee darking desfer deliverance, desolate for deferity dath deface is delutes sy deshow fordictational of daughters defague demeanors, desperate didactic & duroter of default a demented of despise to differ

19 estersum

difficulty disagin & dissimulate drink druker Effrenting diffute disgrace of discipling drowsy + 0 Egothet + dignisty a dishmest wo distaste o dradgery , o elation f dilatory for discolution distress o dubions Elegance deligent for distible of distituent of olive of Eliquende of differenticis dismal v. disuse duff Entertain Scent y director of dismay of a diverse dull & enthrone h disty M disobetient displacity c , Entreaty & disable of disobliques docitity of duty Envenome disagreeble dishabel & doctrone suiges dissappointing distint dodge c. Early o Egyptile uty aby disapprove o hisplay po doggod + conest v. + Erstic + discome displication dogmatical see they swanty discipline of displance dorletal v Ease , siring alic discomfort of Kisputations domponation ent of Evantion disconsolity disquet o dote socistric sopial discord disregard doubtful Economical is Esteen discrovery we disreplied a doughty of rettary I rettarge in rettary discretit is direction faction diefet + Edity Eulogy 6 discretion of dissemble dreamy a, should Everletting discussion of dissent & a dreapily of Herbinate 808

exploration fallacy & feet of fietre Exact v expulsioned fall to tity fearly egaggerate of * futy Exquisit falsehoody feetle 1. fight i exaltetion Extenualt & fallet feelings exasperate filial extinct gum farestiais feign c + Excel . foldbytter & extol & family of felicitity filth is is Excess 0 Extertimer c fanous of fellow feeling & fine excitable of Extraorgances fanatic co felmions c Excommunicali finient V forth + creciate exubefact fanciful o feminine Exultation farce & frofity. example of fitled i farcinative ferretty out exertin fo fixed Fabrillan farkon & fervent V. Stland L flagrant facely to fastidious fertigity eth tirale v flattery p exile w facility fat teliols flevour facting-ous fated, feller c, fleeting Storbitance Hatigue 14 femalal 1 flegible. expatriateo faculty fatuly of froble 14 Himsey fad o b Repeatancy U failure 14 faults finding fictitions Explantatione V flippant 3 fact heartest factor & fidget & flittation , Infraheis fair fairfung . field-shiply fluency o 24 pialion C faith full featily , frentish c explose \$ flurry V +

1.130/2 gravey /x fluster frait + o fragality so giddy foible fragle + fulsame great M gift greedy o follow for fratesant funding. giggler for obess of trado . furtherence greeting gerlich Mfool - harly freak of furtise glad den M grieve - ous toppey Mfreedmit to taxy + glamour grim v fortble. free will Godly glase grafan 1 gross / + grant glodny foredown freeze gasty . gloryt gradginglysx forfeiture c frenzy gain V Morget Julius, frequently gall fry gluttony o guardifa godless. questo x Morgobe & fretful + garse Ngood & - hamony guide 1x forton f. friction garash gorgesus p guilte formality Mfriendliness of gartulous o gormantice gusting forsake o frightful o gandiness p gossofo * guzzle o fortflude . frisky v . gaze goods - ment fortunate friorland so geld 1 grace -fall Habit for princes polisione of gensons gaacsons haggle fool o from gendel. fractions o froward, gentlet my granteur the hade gratafed + hallow to fragile from gensine

ignifile kallucinatin heinous c hospitable mysterice handiness hellish hostility. infressionally ignoming handione huffy help - till infrobable ignorance hap-hazard herds. humane x illiberal in Josher humble Healphipers o Musion in prubence hards - hearlif heresy. in fialosoe humbug illustrions impurity hardfhor herof humobrum imbecille heretation inal verlance imelation hartship . heimbur hardet hideous Mhunger inbern immoderale Marin c . high-trinited hurry & unmoral nicapable in mortality harndness of hilations hert fal in competent immunity harsh & hindrance hush money c merchality hastidess hireling importial mole Hoperec hyperbole hates x hoay c impatient indigence hypoterisy & hang thinks & homestage integration of hysterical in pecunions mperifus haven home indolence headiness homicide indulgbent unfertitionce Icinela heedles & honesty infeturity iney folds idiosynomy health, o mhisas idiot in famous c hmofer implote malialin heart by hope idle M internal important henoen hourtle idolatry 39 coloning

Jaifnty knowledge legality c intenferance Inform x Legendary interest in flefste leisure p jed , Laboreous , inganity. mergretation jest a lachremere Conicat intimacy, injusty Cx lethargic jerusticula laggard. into cication M innother c leveller. jewelry a lament interplate vanuendo job c, langesid , levsty intrigue of inquisition , Mins Nosland jockey e lapse introspection insane focke largeness intuition insecurity liberality jollsty . lascibions , invade in send to tity instative journey & landable Liberty insidions c hicklish * invergle jought Mlanghable Minhaltone moenter joby M lawreate light - how endfil moestigation, jubflant larsth insolopet + limpi larsty Myndicial ; inveteral nispointen hunger. Mlady invitation mishability leastr. liense . King liness & insofble instructive Meaning liquidale Kins folk orksone in suboff trusten listals + learning ivritable Miss netight * lecture Titerative wolstin knowery c. menor oten f iteration | knightly | leer lite present integration . 12 14 column

meretri cions Muttlewels lubbesly massfore majefety livelehord lucre make Speace marleolyt mestry. livels malasert onatol-minter metalebysis luticions y load malconlent method lugalseons materially loafer maleficent mostle lukewarm meturity loil Bing malevolence. lunacy marketh mightimess locality ture mazy malise & migration loftfress luscions miltreat mingre. mildpers loggerhead lusty-yf managing f mensess # milstory loll historiess man fel of mechanical miniery o Corper luyer Sons \$ medsting & miningky: mania longing mer tations manipulate mund - fel loose maceration meekfess mannerly minimise loquacity machine melancholyx manune sseen menestration bordofness mad marqueer minstrel 655 mertace. miracle magica. mas-joy tonidess mag fanimous matriage mer Drown misth + matted menticity loutish magro prence mis asthrope p prove l'able maidehlum martyrimo menial of misapprehenhon lost -lines mercenary main marvel, muichel - maker * logally mastatine mersy maintenance misomback c

f.15r 13 Obdespray opposition muddle nauseous of miller x Thefseon. obed feat & Mneathers + mufortune multetudenras objectionable opprobleme necessiloris mansficence missionary Thatenes oblighting mur detic neelfal mittrees ordeal c refarious c Oblightight 1 neutrinux miligate Morts x neglest-igence oblivious moan music-al . ortinance mutst ility obscene + neutrality + mostery + organisation obsefueras news mute moderation niginality neighers observant mutilate c modely + ornament obsilete ningstilques nollestations muliky * orlledrygx nobleness , Hotshale + mysterious + moromaniac octor Salvores occusion myth noisiness monstony ortracise oddity noughtic W & monstrotily outburst offens nordlemoods-mess. outset morphs ite notosiety & Moffses Naherrup outlandish offichion of narcotic hosply & outlowing of spring noxivus mortification navior outrongeous ogle. mudity motive nasty outshine nutrition onervas mountancer W national outweigh open & heartes mondful # nativial overfive opportund naughly + mooning

overbfaring, punter peculation c higuancy persperious sperbarten lang pelantic pertinterous pirofey overtone + pant perfolling pertuges piteogs of operdo parfile peestin perturbation pitty less overstower. partown penalty pervesu + plain dealing overshadow parasitic henance personnel Maint Mhardolm overtay penit Int hertilent playsible overline parent pension het flaces playful + owerward party perception petition pleasant ownesship ! parthony Charifaien perdition o pliatray partiality partial perentilory + philantheolog please of perfection philologist pluffer Vagestry hassife perfsoly c philosophy ponder Main * hathetic performance phrase poetecre Matigoe painting perfume physic 1 poignant palatable patrician perjury c physiognomy poletica hall to hatrift 4 permicions physiology holdy * palliation patrosage perflyity folde + piano palpetation parferrens perseculión c picture polition hay hatry herref rance & pomp - Aty histy. peace more Jamper hers. Steney hillaged ponder 59 alumin

priest rider probestion, pay chology pope pretedences popular + precept prigs + protexity publity fortentous precions primes prominence puditity portliness precipilate princeaction promotions jugtilism portraiture predestinato princelys prompte lake punchstioning postitive predilection priority + propagante punishment priorey property pupillage protes and priore property horotely properties pure prouds potesseen + prehiption postesity pre Enfinence posthumon preferably postpone , prejudice + probably firstonetty in pursuit & potential prepordering proclinity proscription publishermon powerty & preservation procrastinate proselyte pouts presidency proceeding prosperity power x pressure productly producte Queck p profane protections princtice premoubling quaint prase x pretoge x profession pritestant quarteler + prank Wheelt proficed provident , que felous+ prattle prevalence profligaling prooteation, quick preach trice progeny prudence + quittance quit + precaution of paide sp x prognostic protecting to by columns

£160 Raging rathers- sry rebeficery reform + Wharles. rest - less x rebake. retractoryf refundance restoration rake ls Recontalien refutation , refuning restropant Varybler recipirately regard Es retalifsing refletion recifely regoveration vanischalle notardation: refine 1 raadmi reclaim regret & refressions returnment. rank of i recluse & rejoice retor reprimando rant recognition, relayation reprobate c Tetrieve .. rapately recollection releatlesses reproof 0 retrospect recombento x Which refing nance rapiddy revelory rapline C reconcileating religion + refulte reverge C # Tare To treat revergence of retuctionce refulables Mrascal sc. recreation, remarkable reguital # revile Tashfrese + revolve my recrimigation remedy resofte x rectitude do Tational remembrance research of World on recurrent reminiscence raofgec resent fulfs rich lavenous redeem . remissneps reserves s ridolle ravish Redoublable Temorestrance resignations nitrule, reaction redress x remore & restate x Thight Irm respect-like refinements reading Commeration right renown for responsibility of reatmable of reflection riofons 69 orhuns

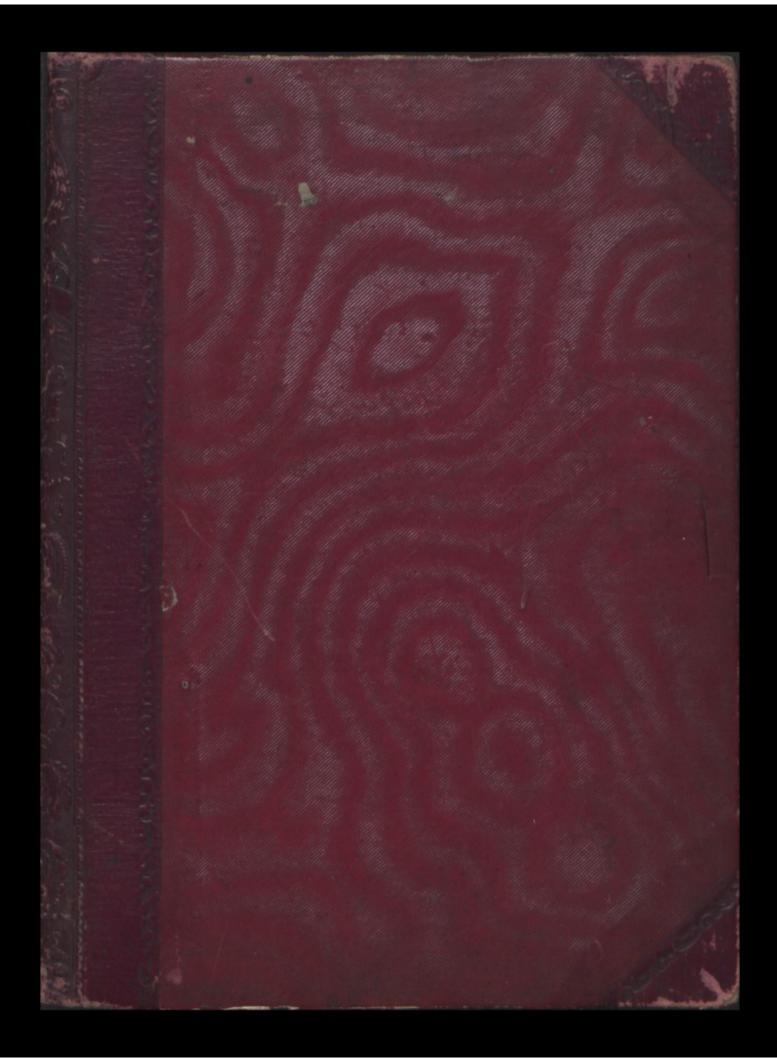
f. 17 15 Sabbath servitions schencking s Wheness Scandal dy Sacerdold Seducer Shrowd risk scarcity Seendinesso, thrick Sacred Zitual Scenery sacrifica scent self-denial & Shritt Montry Sad + - wither shrunk for whoffe Solephia robber Safety Schemer c serile. shuffler c schimatic Sentitites shy - nessy sagacity rodomonlade senstal x Sicken roqueryc Saint c Science Poster Sightly scoffer. Scalentinas & Satury Salonteon rolifting silent Serm sentimental x Scoundrele sevenity silly Sanctimercious 20mastrc + Sanguine - ary Sermonite Simony c When-neps Souther roughners. Sarcation of scrape servitily sin rowky Satanic sumple & Severe s Similarity & sculpture deplical x rules + Satistys rueful Shatteness, Sature Single Schrifts shallow ruffian c Singularitys secession -Saturnine Shamie & rule f & Saly Sechition & x + Smitter rumour Sancyts Sharper c skill -ed Secrecy - True Sheefish Skittish ruth lefs & Savage sectarian shelter Islackness Savour sedaleness 74 column

Slanderse Sowners Squander 5 mutty stoic , slap Stability storpy Snappith \$ Spacions. Stagnant slash sharing wers straggler Snarl strain + Slattern snew c that modic stored Strentions gland the stale. Sneer Specions cx slavely. Speculation store snigger Shick. Slay Snob spenithrift startle stringent M Sleep x Snug Spirited - nal starbe strifu Slight sover spite c , stately much strong Slipheriners Sociable + Spleen States manship Strifagy shumpet Soft- hearles, splendour Sloth x Statistics Soldfin - Wi short ation stublifin Sloven straffast slow ners Solemnity + Shrnger Mstead c Student would Solitelation Sportion sterility shigger x Stullify Solitary Thise 5 pritman stern Shower stun . stickler 5 ree Stupentons Msly cx Solvency stiff 5 prighty Amall lathy Steeped , Soundlence sterd of Smart Soldustry Sprince stigma - tise, Sould Shurn Stillness style wh Smile thy c survity Smorth Sovrow 4 stimulant i Sonny . Sottish se squalid * Sulfefor stingy 79 colum

f.181 16 thrill temetity 3 attime. Sybards superior throe temper - ale Salmireroe x Salvestetions Symbol throne templation Sympally of Subritmedia Superie thurtek teracions bulkermance f Supplant tender nop x thwart subterfuge c supple tedele Taloo territale -or Supplicant Intile . testiness tidiness # Supretacy tacition succests + thankful. tiff suffering - ance tactician timeliness thestrical Sufficient swifeit ! taint tale-bearer Mthaff timedity f & Surlable Surly. Suitor tipple c . talka live theological Surpas . teresome My Swiretiles tame theorise Sulley # titter thick headed Sullen' Surceptible tordy title tattle p thref c . Sultry Sulpente trad-Sader fo tattler thinker Surprice Sumplieras thirst toggery taust + Sutteriance Sunder tril tawdry thrughtled Swifter Sunny thralfton toleration 4 tearful Swart backler Supert throtel lon foolery Swaf tease , Supercitions by trothrome Sweet - heral techy threfler Superficial o tomant Swell, a tedions + thrift Superfluoris + 84 column

tresposs c lighty ville. tortuous bassal f torture c trebalation vegelation unclean of vertuouss 6 Touchiness & trifler underrate Veherhent virulent tournament trim sons where ne venal s visionary toy trite union oenerable Vitiale bractables trivial apper - hand vengetrie of vitaberatio trollop tradition venomons urbanity s victions 1 traduce c trophty urgency ventufous bijen c traffic strouble use -ance veracity c vocalin tragical touant w Mesurer c verbosity bociferres traciflent uswitation · traitor c volatile p persalice trampery of trangentlity wyorkons & bey altin brangressine brust-fuls vicions c volunteer transport trath voluplusting victoritàs trashy tumettuous Vacillation vigilance of voraccous stravel turbutent vigortas valgar s vagabout Wy traverty turpitade c bain-glory p Villainouse of theachery so twaddle valight-our vindictive c wager tyratny vanity violent treaton waggeshres vangfush virtgo treature tremble f virginity bariableness wasting & 89 colum

Mwicker c wildfuss wanterer wy wrong ful want wry face wilfel wallow variness . willingness wintome Yearning warpior wistm yell wishish wish ful yelf wasterful wist ful watchful yelling & wit -lefs brevering . 19 pages warry cross woe ful colum whose Zealot-our long faver w wombenish words wich way ward. Mwonderfal Zest Wieakling world 23 5 5 word 2000 in wealth torrdiness n Murry weary f & worker 35 column sie sie weep worldliness of 1575 to 1500 welcome of worship + whotak worthity to 60=1 m 24 wratigle wheethe + wrath wroth Whenter wretched Whensical of



DE LA RUE & CO'S

SUPERIOR

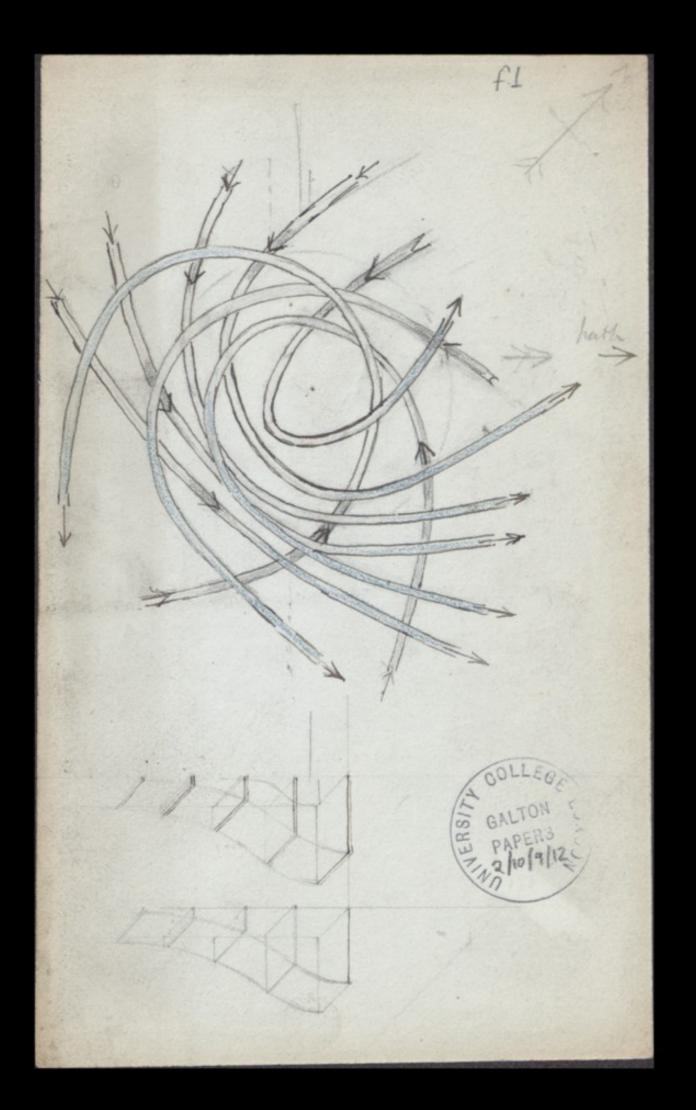
SOLID SKETCH BOOK,

FOR ARTISTS AND AMATEURS.

The Paper is so compressed as to form a solid mass, until separated by the introduction of a Pen-knife, at the space left in front of the Book, and passing

the Knife round the edges of the Paper.—Care must be taken to cut only one at a time.







La Cas de refishe favorable, nous arriversis)

Was gird . lefter in Zar few your Bletterm Tanton) Dinge Janto bern Snow in Mars & meahore Suns le Queen Bees mats to special food - new Don in embryo government of hero mechanisms to delicate throughest indeconcernent of special sentes 4 Bugs alis of intellective sayotion (In refine) Mervelonia in Third 65-25-40-860 =40,40+60 7100 Sith copied redifictives & 20 Spin , transpired sheet - leather. Polyrice toler to har region as a drance of prover. Swift Spaces Therm Clectic connection pelings a N.S. Rafige Coal born rejactions - Teles ouchet. fits i Mosty of lecture, then and Comming on

Vivisiclos in Jahren Ength & Store in a Cyst God be converted into it: bigoles January abolition of senter - treats of English Renfeir Chinese exceed benton miles photograph of dond Omnifoliere - lortonse Reserve man capable of seeing spince in 4 Imension animals brown in graffed with organ of speech Telegraph language Bidgin Sylinh and beater nature is makes were a firm of Sung yourkee & Chinese Breeding go wills into men

refraction indy I water 1.33 h .. Salt water, 1.343 1.00029 Water levels waterless raft with she wand

f2v more + (10.11 } 30 fr mon lurger (11. 7 -Gren/20 bull) 12. 9 Never 1220 Sancorie 2343 mouling 413727 S- German Vich Jeh 5.12 7,29 9:46 10. 4 10 . 25 derment 8:45 when Clerk gir 5.10 8:12

Vidy Seavraled not Dean Jul 25 Seconter My 25, gam 27 gam 589114 25 70 at Vichy My 29 +30 1 16 21 24 14 2 5 23 25 25 10 8

i en les Surie handry Huma Shory carely aug 10 mr 10 mode,

9 yard between holes about 12 5 pole intervals See holy are metres apart the lean at could de elever, time in 121 gard in 121 yours races 1.03 gard 27 destend tolot 224 yun 94 years from forth observation & course which went rome) is about Then are

Levell (born) 20.3 feet 2 min 28/elpos All (16) 10 bourt loure 132 in minute bound per minute. 120 (16) (2) (3) 20.3 22.4 201 I mute in

Gellero & Gollero fla 3º race 3 (3) pretermines 1 × no well comulto our to the great paralley the times (distances) Monte parally (12 22 below allow to parally SII have been 4 horts add 14/2/5 34: 14:31 14/496

= 300 vel miter phony 15x60 as Equali O at hou diff avery french 16 Plat 10 non run 3 her how him deflection of 2 mil her hom my Scrale frels of wreen certains not block nor anyour cloud Afterdrates - not purple mental I come & without affort. When eflicer hever handled will free not sen before. Can recell neared relations to well that if an artist the U dream them. Can seat an impone fore us chain require a not to see

the could through it will Cyce that the figure day quark the wall, Outtin clear - back rown natural - Colones as the are Eyer West is offer not mind were wird to does not become neutil arithmetic cho ust her of proces that it was a in a state Just week to hur appointent Istent ones Freom patricial abover Sound great ferran freezente of sound. Afind heavy nami of a Street Hancion fit a writer tee £60

Wail f.6v Vichy def 5.12 S. Comain def 5,40 mouling 6,481 def mantchauir arr 11.207 dep 11.52 Chaquy an 12 52 7 25 defi 8ijon Eulmort Chal-and 5.40 1226 Epin el 2 .29146 6.53 Géradmer arr 5,581, 9.42 12,78 9.16

f.Fr 13 gard TO SE Ned hace

Wed men	lies	Distance 7/4	yard =	2hl mid	her, 2	attendown hill
93/2	133/4	gentlement bay	a Shorld	9 have in above distance 9 have in above distance quies 29 vides & 1 face 10 128.2		
9/1/2	6	Woman	u	Men a	3	5. 4.5° 5.5°
12/2		gertlenen Girl man u Woman	Florise	9/4 9/2 93/4	2 4	5. 5 (both soldiers) 6. 4/4. 5/4, 5
	T In		- 604	10 en 10	1/3	43/4

Questions on visualizing.

Efect of Showler has) Sensative - 3 stages

1) Perceived; 2) Unmarked; 3) Unfelt

Unfelt. - Bodily processes in hearth - moderate presence & which we is accountemed as ving in finger, artificial teeth, extra clothing; one; own fat. Smell. Peculiar Smells of over over house, selfa (Hable could at Schönwald) - Perfamen ship, coontchare ship.

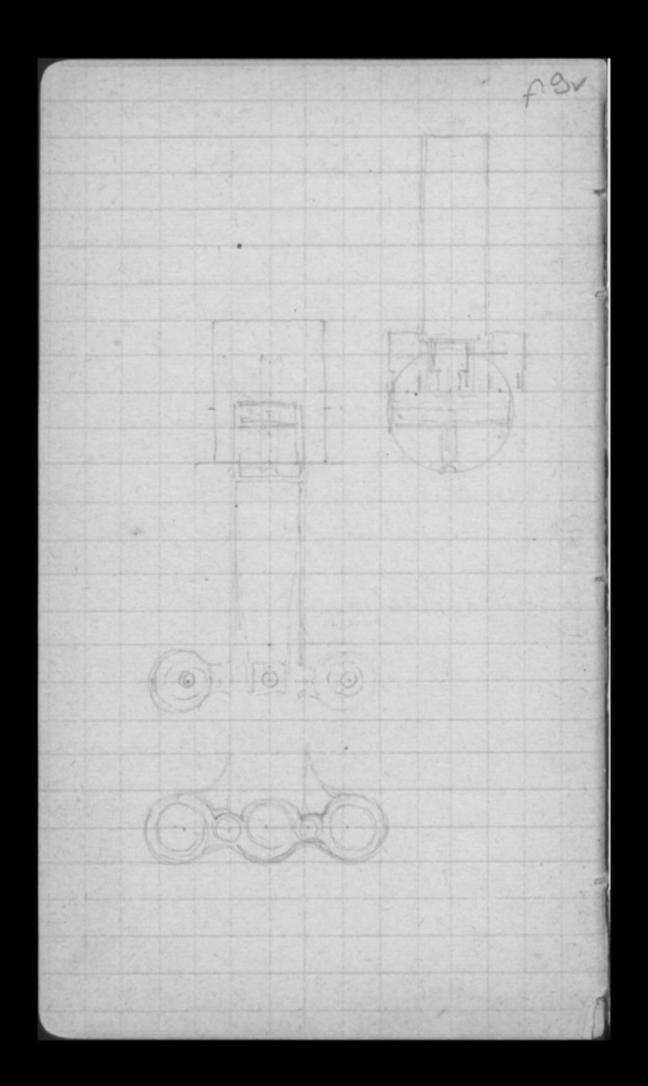
taste. Tobacca susted with dask.

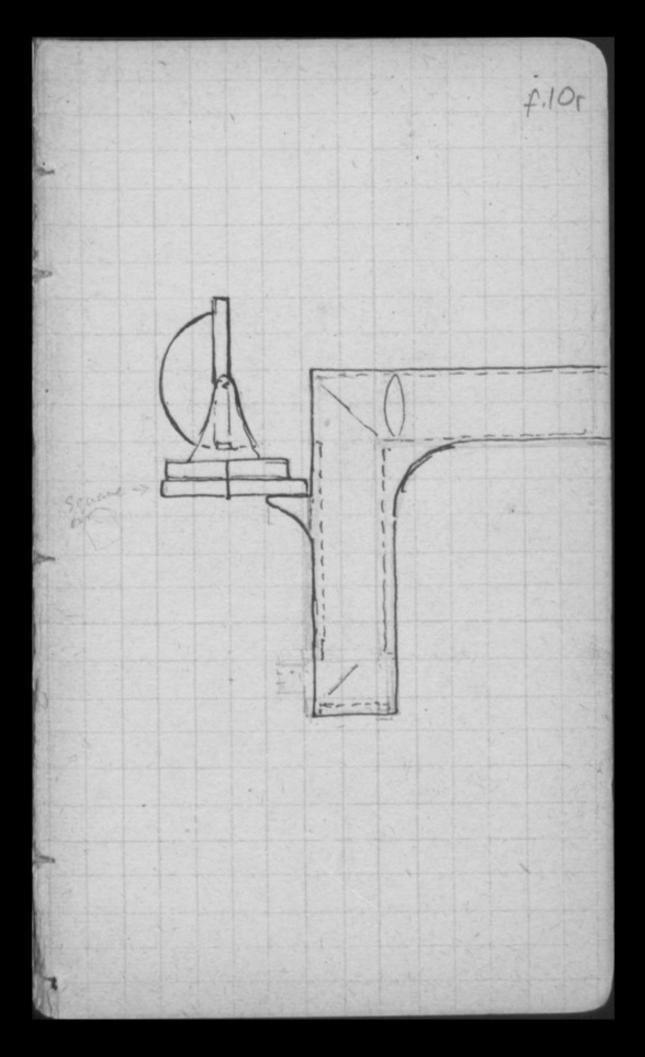
Sound The hum of a town - not fact of tested as the Ear is never long continously exposed & the Same Hone (? a mitter) and no other Sound Sight . chille . but an fith that has no Eye hidr in a faint lit sen might not herholes feerceived

When the physiotogical demands are respected to without effort forganism adopted) stimular is unfelt when fresh in the morain their are unfelt when we feel when tired in Evening - weight of himls - head of

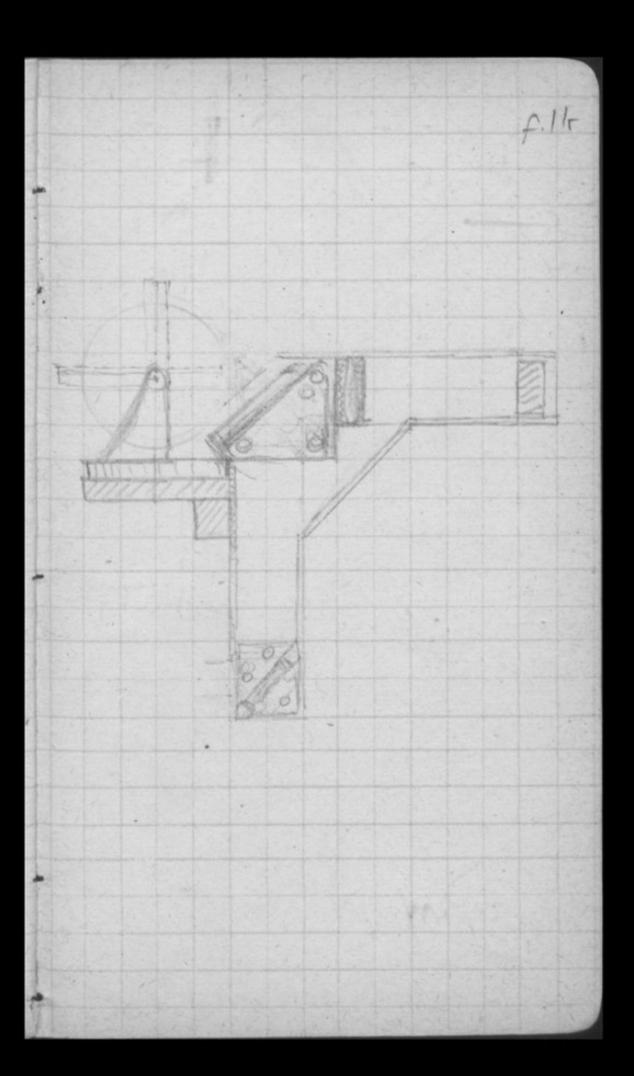
Exherened: repered on rate of adaption & rates timereach of stimulus.

The Hereshold is not a tharpy defined line but is one where the ratio of right to wring estimates has a certain (arbitrar) large ratio. We have to betermine the (slow) rete at which stimules may be increased writing varying that ratio. There a man conseques P has to alled to the and carrying a tomall weight is just an award of it existence; after carrying it a long time the weight may be somewhat incented & he with may be somewhat incented & he with my he somewhat increment, so to a 2°, 3° be increment. In squal increment, what are the wivery I necessary carrying time to allow of herfest adoptation. Eye a bight.





flor cal 224 H. B. 116 116 116 11/15 14 20



tim

Stanfard gas flame trial plate in dantamen "466 years good but not enough exporme good but not enough exprome. Tubercales looking 42 47

Mucch 30/51 atopted 24 secs Trial modernt pholis Composites made 50-58 inchrene good . I have no further numbers here) - The from much be to add zel more hyrra pay 12 gr. tox of 10 dights of Soward t developer alle lie hichire is well come and so as to stop farther retain at that price 40-49. The plan succeeded I think I'm I added the fresh payor perhales a little too soon - I gave 2gr 46. 30-39 the negatives are very this is she bended - a bad lot on the whole to a good combo is important It mirle to best test to be the bad ones o male a scratch lot of the best ? 23-31 I have already

11-22 (13 afterward was the fit 11-22 fair omil 1 (too fairle) Co composite of 2-58 Cefe the (Lix) as above with an of 3/2 tec 1 Each 21/2 total ity chromagraph Haut & How in coming out. 3 confortes intone XIX 25 sect that 4 from 30 sec told exporare 2-29- 40-58 the bad me 30-39 allow 30 sees in all Transparency from Co Comp 2-58 allowed 20 secs & small flame again 20 sed fell light read double

redeport 1, 1 5'1 much apparalisis A for mounts glup as an ofrague object B. Futted ground clube just Woh photos both & A & B Fitted in Dallmeger 13 lens april 2 / 81 Lancined Camera to bold - apparent get good, but ? as to light culing 1 transparency & strendard lices song black over back blide & Enliged a portrait with Barrangeness above herfectly white 2 good. Sandpaker camera Aloder & make working Cut trame tel. bottom & allow more movement Counterpoole or make new stundard I photographical

Suit while & good (sol a Little facut. beg good might be dencer helley Comp V 48 - 47 left & colored is les by, 42 both lefe 44 raffeth uplwraed face good good, a thought gellowish & facet Compre V (35/36) 34 33 32 Compo V 59 60 61 62 64 (there is no 63) 23 24 26 - 27.28 there are all faist (2125 bad) Compro V I developed these last 3 Roug on Sunty mon 3 f. 150

Sandy afrol 3. developed 3 \$150 see back in the Bash morning arranged latter cloth to make interval dart between tens & stigle Put black dott in free of slods Compot 15-22 all care the negatives are bad. await & went to Wrollen she to overlethored. I too with hyon. on the tel them stong longer in developing dish full. Tried in Roening 3-6 sech Egyptime?

brith seemed ample

5 sees too mind . I faile?

after somehow at least I throught so

april 5 Wegatien & transferring fin conferati 1 58-64 (6,63) gave 4 sect - ample time I think . used 129: hylio in Cowards - rebut not warferior to the positive bread belles a by but morny makey hyro a short if bother four macel

Treorous (this are of entires year back. Hencefort 9 flow fern fim may 10/82 Gradus Concordances B. Vh Shaleecheaveds 6 few ording connections of deferret words Both Jews numbers Flinden Vetrie in Esternature of fractions it it Nature Dec 16: 1875 may 13/82 & Naguer at Hanwel He is free Tues Thurs Sat a Sandy Writhethe. Says that much men never izmpaller except the aproleptic. If you her I men walking byethe one of least is sure to be stileptic on invalerent. Sexual - religions shrelt concerna wit it faline abdomind dell-abarement andro feeling in though the bowels were con booky non-Sylvation & Sawa man who had subjected mores a voices. The noise were

malevolen noises. They were accompanied with colors the Same colour tothe Jame Solum, The colour were such as one sees but more various a delicate is tent a high war green fre 154 with making hug. The colour did not hide what was believed It was the looking through slain glap - Objection horse save use the colour. Diff out (number) set the with a - working a to remain longer in the markers Taylor, Thomas Theoret carithmely 1821 Folk-Lines Hook Ginsburgi both a the Catale

Horse in motion Phryne mide 19 90 10, 11, 12, 13 to tre legs 17, 18, 19, 20 to hend ligh reversed that there aler a regaction of conventional sallof h-loz. men. I ought t-cut the first pair in halves & Then compare & make composite with conventional.

£181

Hantivell may 29/52 f18v 200 210 22 H 4 N 23 N 50 6N 269 25 9 29 8N 27 E 9 N 289 29 H 10 N 30 C 110 12 N 310 13 unclufer 32 N 33 M 14N 34 N 150 35 N 36 2 Motto 160 MM IPN 19 moth 38 E 39 N

£191 40 Eskinger)
41 E 600 61 N 63 N Produces 43 E 64 uncloped 45 E 65N 45 E 66 N 46 C 670 SE 609 69 N La H 30 E 51 E 570 53 N .54 Kerelafel 740 55+ 560 57 N SIC tinte 550

86 NN 83 C Same on 75 83 C Same on 75 83 C Same on 75 86 67 H 160 101 N 102 N 899

Developed about fuberty. M. strub. Care, A. Mstb. 72! DEMENTIA, THALLUCINATION (SENSORY.) EPILEPSY

Truculent = 34 62 Po o pechopsothe GENERAL PARALYSIC fewer wir ulder unaltishowether suce, I ve heather families lugarly (C) MELANCHOLIA

July 11 Viriculture 1) The arcendancy of nature voes nurturic 2) alleged theocratic interventing 3) Otheroed conore of hereoly 4) Vinculture Total al clinter July 12 1882 2 about (nearly very) \$ 2,236.

marence arr 2,46 defi 4, 30 Frankfish aur 3 35 130 Frankfirl det 4 25-Heidelberg err 7 25at Briger July 19 German com 386 marky Circulan 19 has \$ 90 circulus 229 Cabo Colle

ottile Gersey # (ten ket husball of ruce of my two herson in it = \$27 hedporth variation of descent from generat five brother = \$ 2d V(12+d2) =

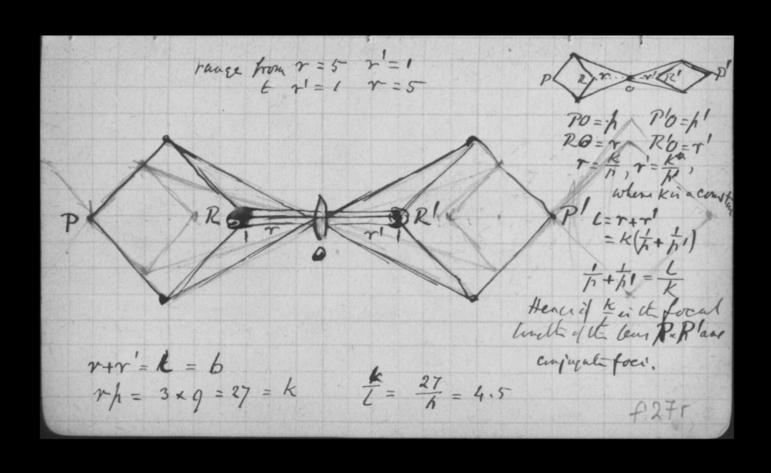
~102 = ~ + d2 ~ = V(v2-1) Suffer this the the value of & A= 4 4d2 +d2 Uncle & F = 2d , to f = t. 2d.
Ande & son of F = 1 2 2 dy 2 + (2)2 this must be left than 2v which it is

F24v 42:39 364 proboren a brifte under 1 grade in U: expansion 18 28 56 70 56 28 51

Baden walker promenade Every any 9/82 men 8 families person make out 48 = say 40, 40, ~ 10 her cent teell black Stelach latt blue chesnot Fair Sanguer Oliver bitions Nomanight - 47 8

f. 261 1 hut (melly 1) though Rad 1 Fair. = 50 gran, for therend requere boths of mercury

f26v

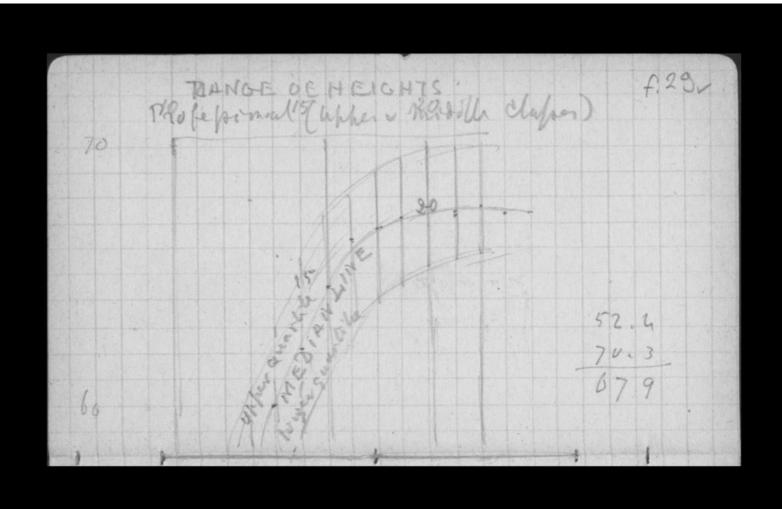


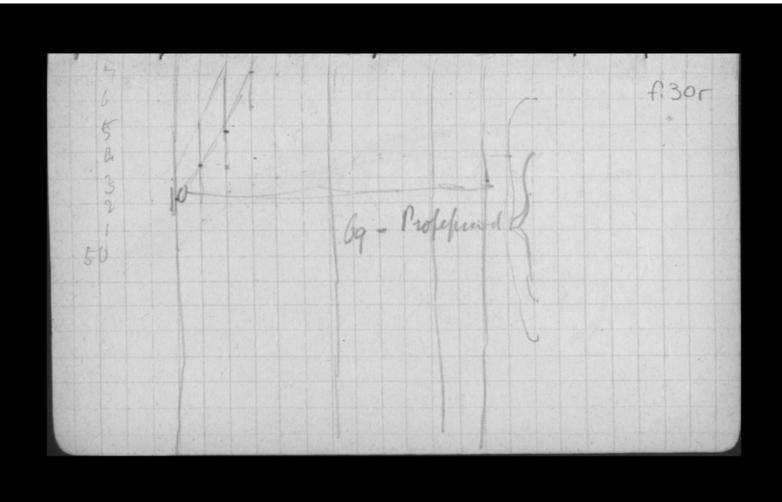
feat of enture Townant pugition test sense of pain Vista voce Gam Hunti field (some real rick undergene for landalt from here, weed as on occurrent tess in the test hitrey a partitiable renta to the let? If so which easy subsuper Ed) Temple with penality to facture. makesper & lon not Presence of mind - Cigarette & horse nord availant Me risk the avoided need sed be Tolar expedition travel 15 1 an justified to as smooth (arrived Corener france present I min "Come in there is nothing thear"

f.28r overruty a week Jumigraname as terting a many digerties give him long food a physiological Colin his. afteriours Sancho Danza & Barralaria Chertet or morre Competition but with a hood for a big brise a a to penally of court on more Oler Amali pleasur verme a small from = a douth from & newboal ship given a dog who would follow the x 2 n 3 hidden accomplise that his character without creelly of com a rationer amply to said docard elicentrate fright be Thee of knowledge Dogs had demonstered by yell lenflute with left dearn formed for eter mer altertion Let opherate say will con 1914 hora Some like ording steel while will morneting toll my magner will affect of which harden then I then I may be repetly

other the soft in Their al once and in any position to any mangage I have more than shee a bedenny stated how much I went serpestion any appeals have English to me letty Tealory precedence Philip drunk a Philip sober who wen to write people it I such thistory " Beware of the dog" I weternes oursem certification Gig. Bather & Copil Serv Typ Ignorance of character in one hillings with Hegros de Talience metalland Reply of the world who can make them selves for whole to allere Justin con much Mensione by by my verill to Torget "for experience shot only"

Tor vino averital am into come funt should doll the withite fory busines & belong character

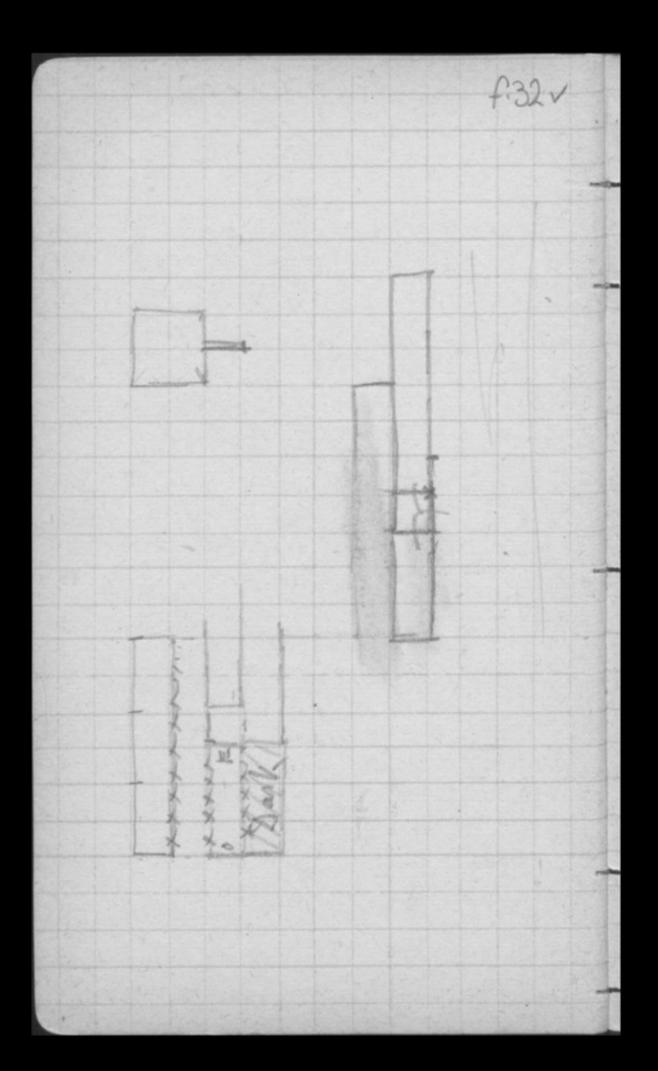


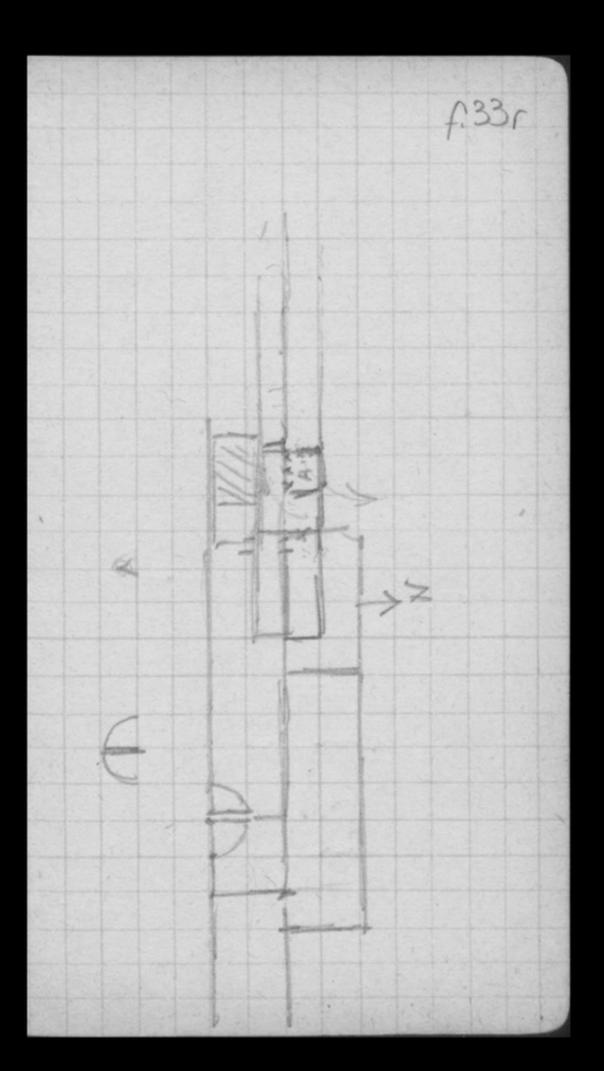


f. 29v TROFESOMALITUSE (Restille Classon) 70 52.4 60 f.3or 69 - Profession of of 50

mr Paffingham millows. · Combridge mils morrisu Nart Hall Newnham Bartez Engueer of Manchester Sells the with water whells Enclosed in a frame this ad like turbiners - Ly Baylert er Cavendith

mean Folial devoalin from parental recen Stature Fetial Mean below (-) Pavolet 39 38 90201 247 238 172 90 36 No filial 1157 6 7 20 34 48 41 35° 17 9 Nearly faces

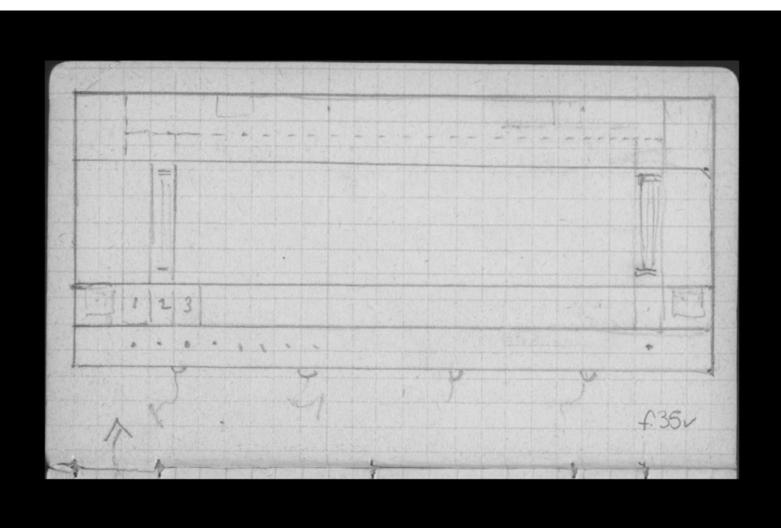


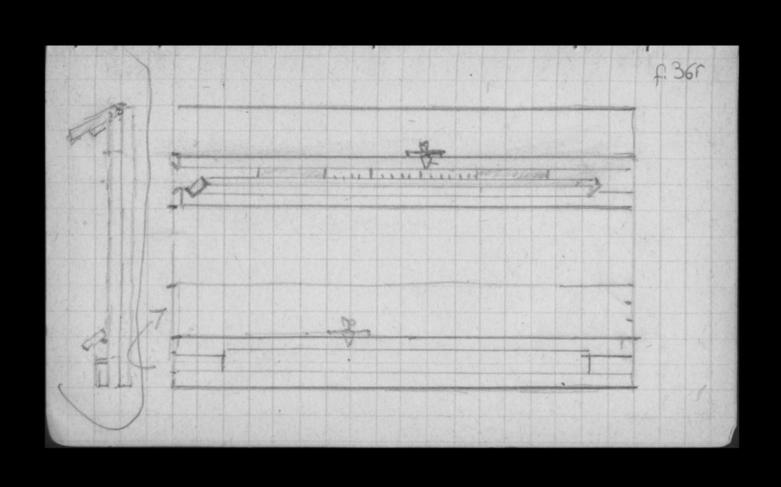


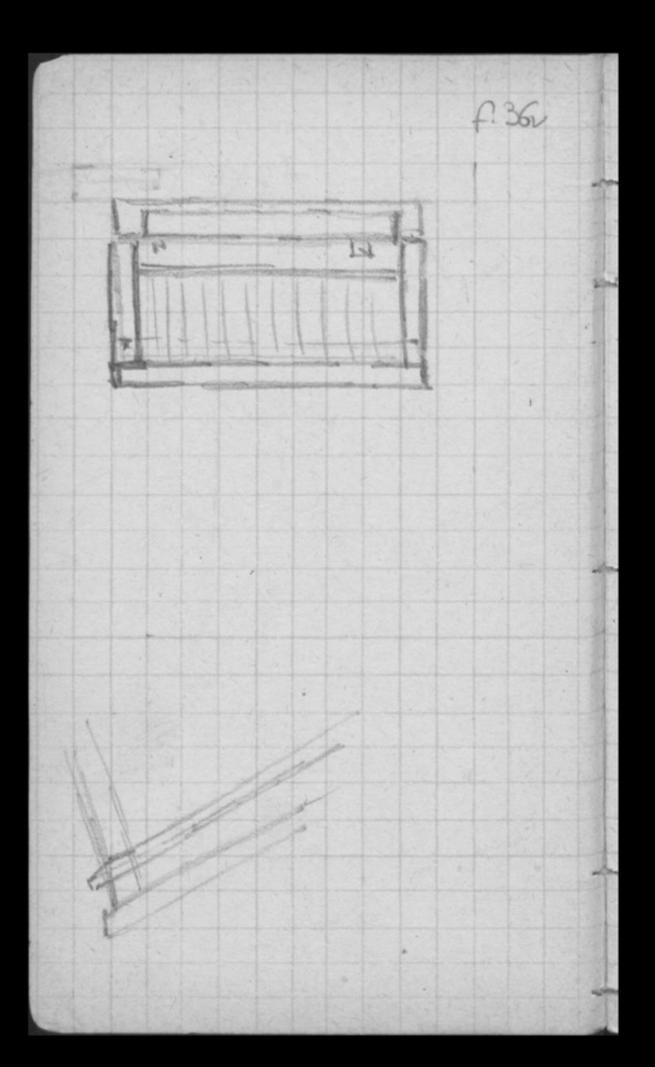
North 30

f.34r

D:341



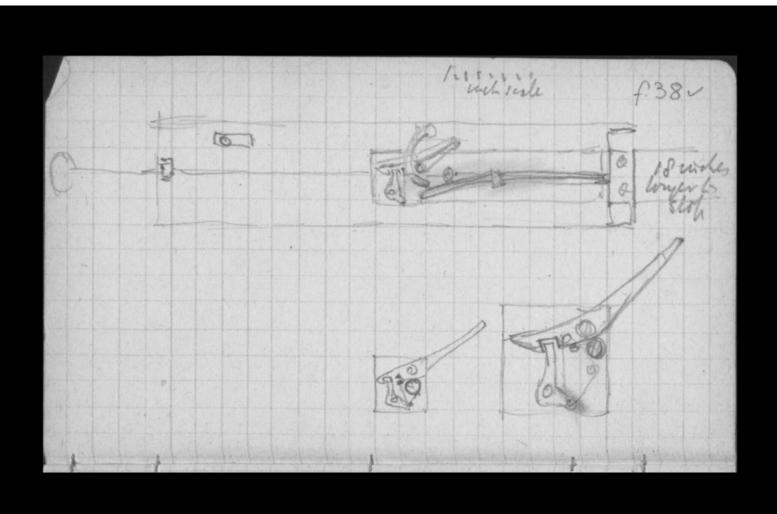




f.37r 4 high

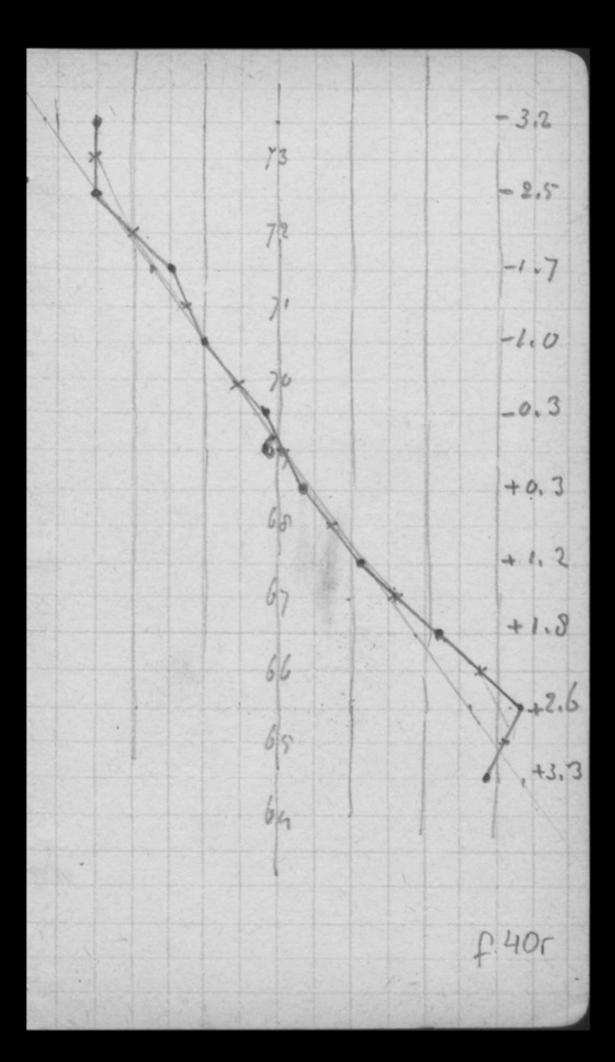
f.37v

f. 38r 1 No of bitrales Legist 0,380 10,000 20.000 30.000 50.00



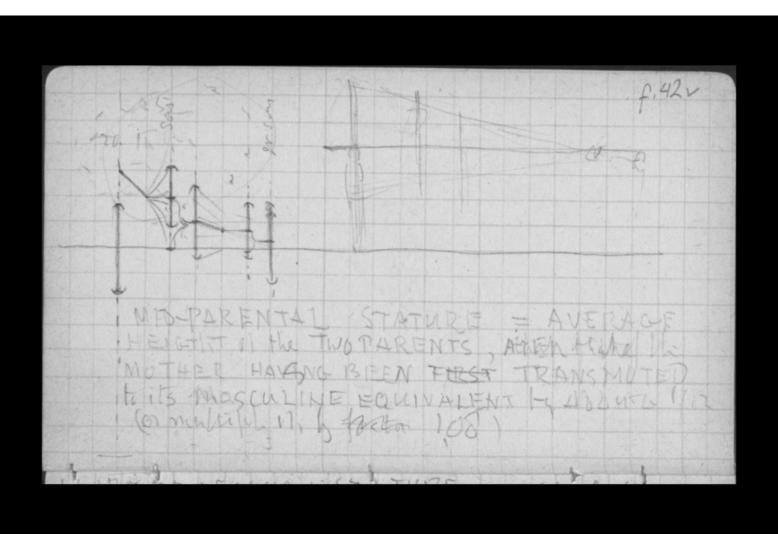
f.35r

This Parent Child AN 100 = 9



200 200 Cta 12 devins routh his 16 combined 1.17 = 1.37 1.722 = 2.96 1.72 × 12 = 2,42 = 2.56

Descendant of a Single 1. (39)+1.17 = 1.39 = (1.22)2 II (1492+1.17 = 1.95 = (1.40)2 1 (.46)2+1.17=215 = (1.44)



LEW PIRATES SION WISTA TURE CONSTANT DE THE CONSTANT DE VIATE SI SIDIUM UT 23 3 CONVERSOR DE VIATE SI SIDIUM UT 24 3 CONVE

the man probably deriates and 2/3 on much as his mor facent Stateen I mil - parent known in child unknow Bleatable in Slatera Mil Vane Stein 3/3 her 14 Bata mo han 1/2 1 An Mehrere statu 11601/4. amount Idenation about or below level metrount on cilled Derings devate from eather our tangent

med vont in stature 5 60 /4 The amount to would individually several deviate about a below the level of metroent an called Seviale Deviates ex Stalin knym unkgining ngesprobable volg mil haved son 2/3 /mil- from m / 1/3 / su 3/2 = 9/2 × 1/3/ 02 4/2 4/3

The Deviate of the Child is on the average or wontone, fraction of the Mid-Parental Deviate.

The present data show that fraction the 2/3 and the level of Mediocrats, to be holy under.

Deviation in Station to be holy under.

If the value is known that if the time of the baller value will most of the deviate of the house be found to be

Mid-Parental Station

Mid-Parental Station

Mit average station of the two parents after that of the mother has been browned to it, made equivalent by multiplication for the solution of the holy about one tweether

Parents by various demonstrates for the form who differ to various demonstrates have mean heaville under 1 and 21 35 43 4th 4d 50 behave 355 as 24 35 41 47 49 50 contained by few of he near the accept when the philosof fellight 20 roule, tellustical many lother they another fire the form only Short, medium atall male & MT (Atte females 5 mt) > medium means 17-70 miches

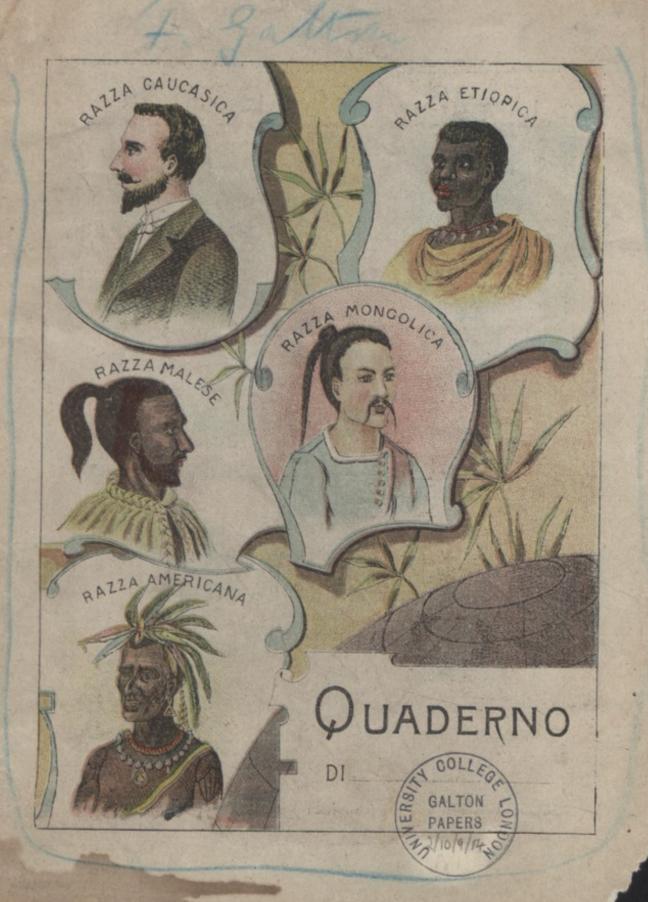
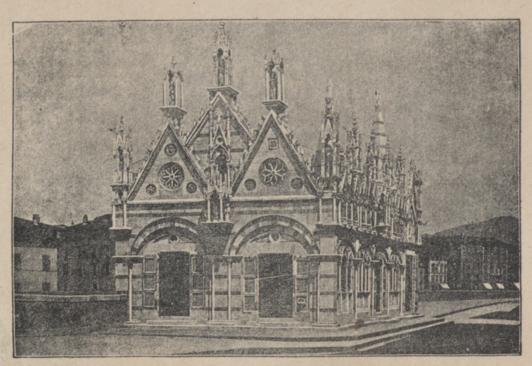


TAVOLA PITAGORICA									
1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

sout 250 experis 101 1 .-230 x h = 115 = 9 1/7 + com 4/00 Envelope under 5 a handred 10/8 12 12 exha to accordal \$ P \$1.10° 2,-Nov 3 1904 to Wishepperd Newspales: - The Spectator attention Nature Kandyles, Anderton auch Chile Chile, Chile Chile, Chile Chile, Chile Chile, Ch V. Brankerd, Lary Kelby, without, Canderon, W" Jarwin, Hartog, Leongh Varwon Sir E Buck, Midwister, anthon Hotler, Standard, Every Botter, Mr. Field, Cattell, Bowstel, Geof., Frank Sutler, mestelyne, Edw Joheler, montage Better, hip Buttuerot, Sind Goset, (Pooley find alres) also it member Ut CKa. Sheppened Hothery F. Merein Lary Pelly





Cattedrale di Siena



(log a stort took) enemse bught of

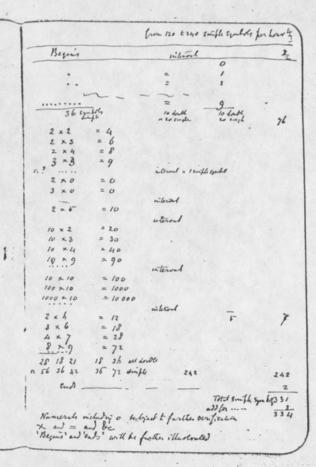
1 symbol in 15 or intercal of 16 me = 2 per mirelete =

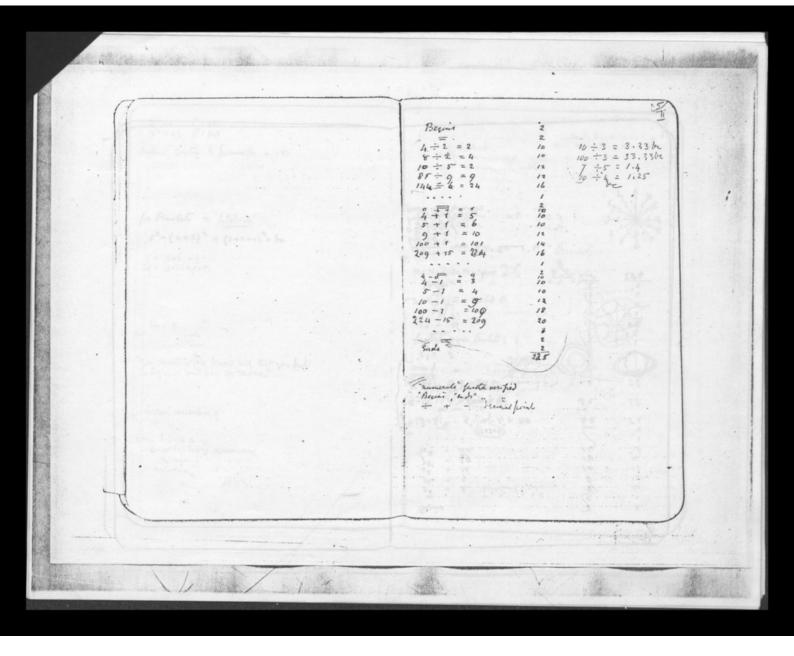
5 symbol t are word give 20 word factors in food case,

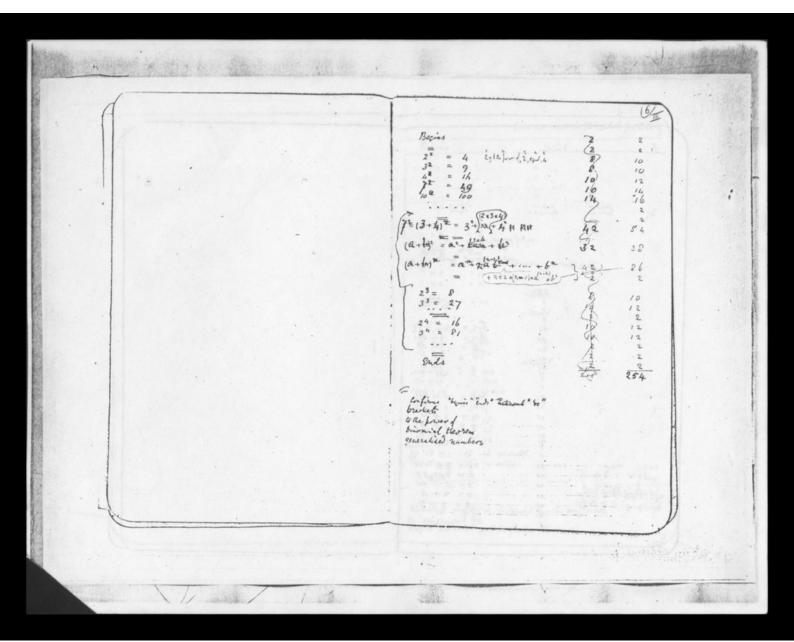
ought

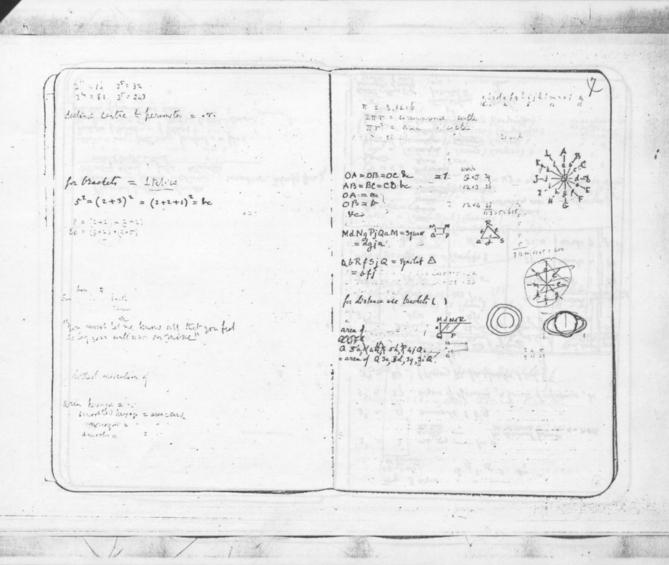
one

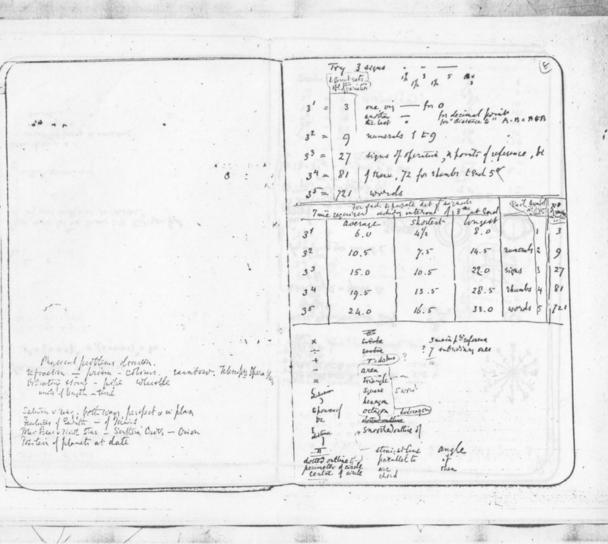
eq l
o PAPERS PAPERS 2961 2961 2961 four six six nine two cato
two cato
this cato
word sand 19 19 two three four e 9/1/29/ two into one ought egl two ought 25 three into one ought egl two ought 25 three into one ought egl three ought 25 one ought into one ought egl one ought ought ought ought ought into one ought 265 Seltrumis than for - munerals subject to further serification equal sign of multiplication sign for the subject to further serification sign for the subject to further serification

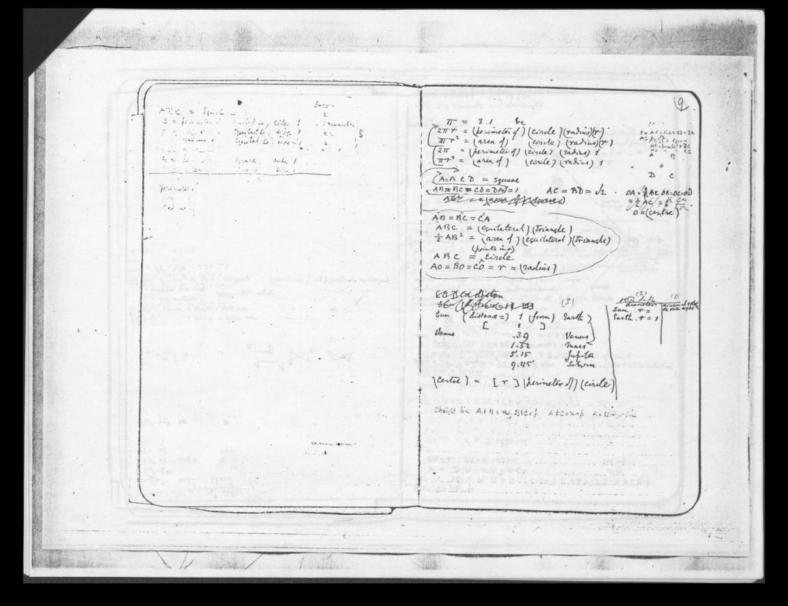


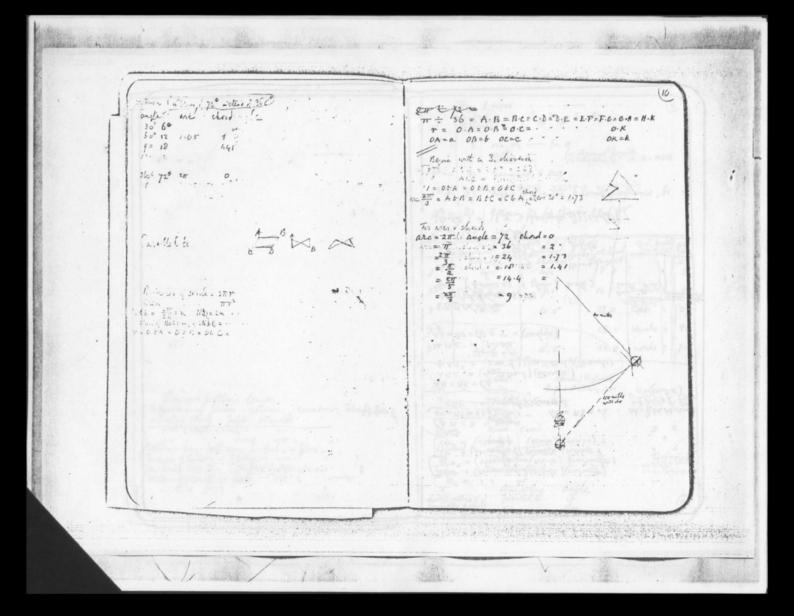


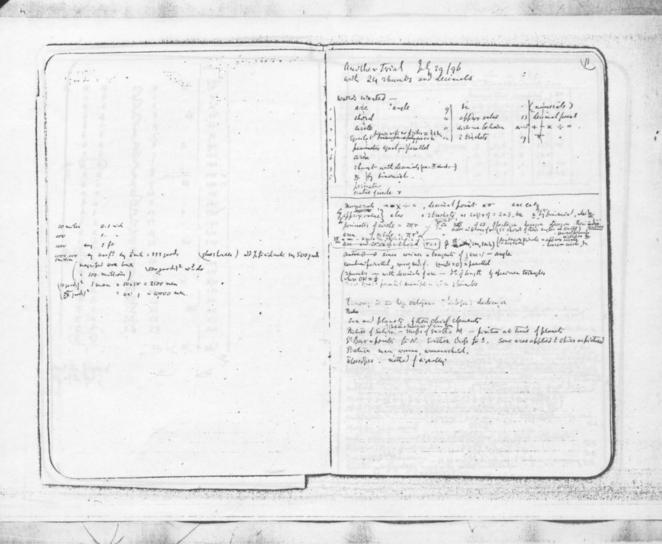












The 2 stell the follow A : 0 x = 24 x 2 = 40 x 2 m months of the stell the s

on the Begund

3 desperant desants and alle of the served the special extended to the served to the special desperant every 3 and 50 to the few served to the special desperant every 3 and 50 to the special whole should be special with the special whole should be special with the special should be special should be

in the state of the form of fire (a come fully on they of the form) for the form of the fo

As a Wirele to Optimize grand in to Judgers for a fill within the wife and the optimized grand to the Optimized grand to the Judgers of the second grand to the Optimized grand grand

the colint of the short had followed the base perhicular her at providing the intert that from complete the of the followed the continue that at providing the intert that from the continue the continue the continue that the state of the state that the state that the continue and that the continue that the continue that the state of the s Experience of the second of th 1

9 Paragorable file Poter of the Nellowa Corpete your telescopies and repaired to the potential and repaired to the property of the control of the Nelloya Officer and a seal disposed repaired to the Nelloya Officer and a seal disposed repaired to the Nelloya Officer and a seal of the Popology the astronomer of the Bollow a Stranding of and only to antisphen of the affector or in part of a flexional topical find only to a manifest to the strand topical for the strand to the stran As leaves, is the water survey count of out five wood out a best would reach a the account about 1 to receive the tender to be to the world We a current father that some of the mornings control mainly of words of only 2 bellow a order of proposed of only 3 bellows the Form the market of the course there can be lost of varieties fall former of 77 by the letter and yet though writing of 42 5 25 mm between an artist frequently seek the she strope 3

timble record of a message will fusfable be made and when it has been a been a heart four the total which it was the record of the total when a record will be appeared you feel to the total when the semantes will be aquelly sould insuranced before long. tests tests 500 2° 50 50 60 60 7° 60 .30 .45 .60 .75 .90 1.05 1.20 External fungerish a 2 th time special.

In the state of concerned meeting of the stellar by by and socially the state of the control of the state of the control of the co active of the active of the first week of the designation of the major with the control of the c 1.50 10 figures 10/2 40 21 sports - cond - characterist - 1 300 - 3 450 - 4 60 - 5 750 - 6 90 7 3 . = ----45678 1 1 1 half = to me greater to the contraction to - - - ~ 3 1200 9 1500 1650 12 195 The sylve 14 15 16 225" 250 70 270 show to 49 300" wanted the as 315 21 21 24 345 360

Calls.

62) This inggested wherfrelited his confirmed by (1) (this) (2) (cone) (3)

(3) (this) (4) (cone) (4) con the cone of the cone 11. Links (20) = 39 (20) = 30 (21) Similarly as regards the top to among recording the which the whole photoes of adecimal arithmetic is beflained to the whole the could be a familiar the whole the will expend to good to another the will expend to good to a could be May be in digition which became of doubt of 2 could 3 to 4 on and then a server of course which ator meet to decimal point a confirm the meet the decimal for the action of 2 = 2 - 4 - 5 9 + 4 = 2.25 ; 7 + 3 = 1.4

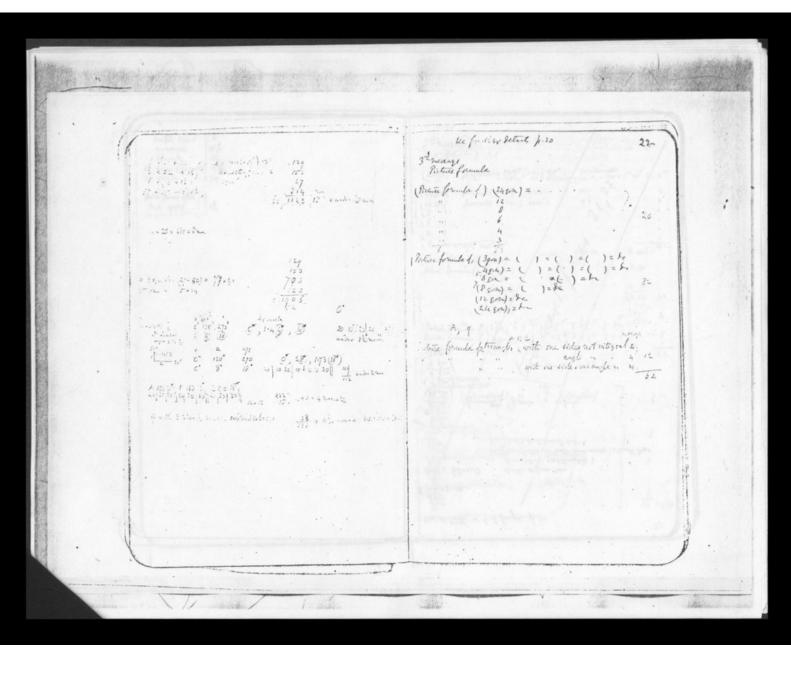
This marries design with

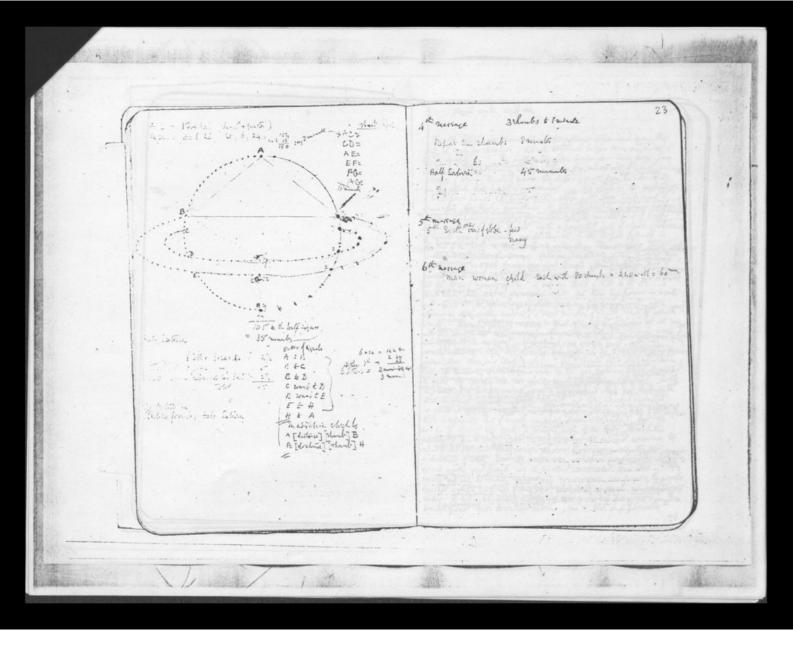
To = 3.1 . (=4)407 | 31.) GALTON 5 PAPERS

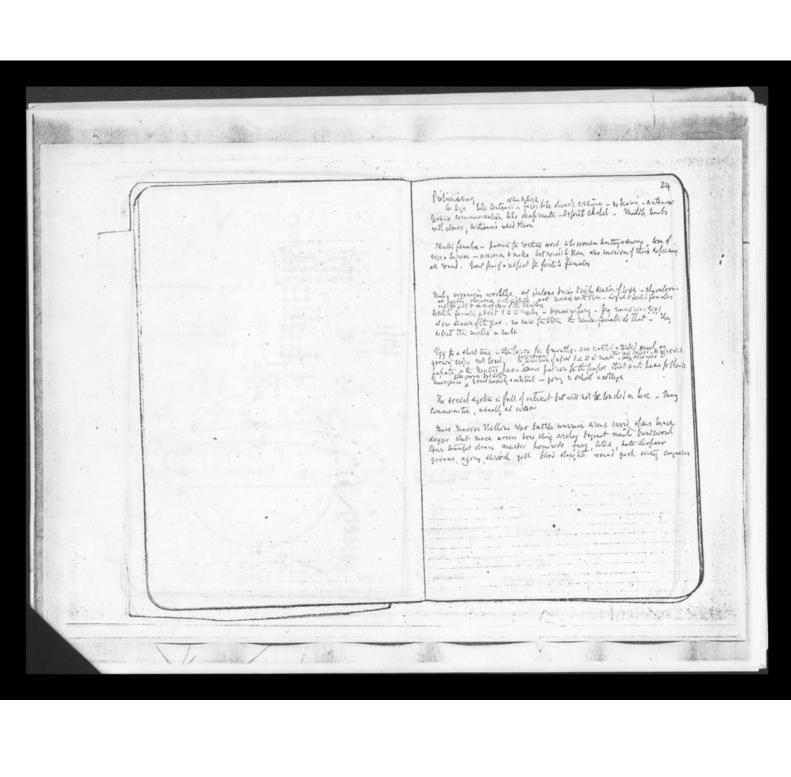
Smith stand 6 numeral 10 % shumby 15° 81 bigue Affectal 2 19 % 243 1000 hr (hile) herinter & tothe; one me [2450] perioder = 27 th 1 20 62 [2450] perioder = 24; area = 1250] periode = 12; area = 6 1 6 1 extraper office of 10 Return formula f. (2450x)
(Return formula f) (2550x)
(Return formula f) (25 50x)
(P Da
(P 90x 11) 25 to. 8.40-2.40 42 25 42 1 = (") = (") te #10 (Robert france of (5 g/a) Richerte formala of (Agen) Richerte formula of (Agen) 22 diameter of 200 (anth) Child placed from the one of the control of the con wifeon my in Tile willy) 1.24 Cm 5 00 14 1-20

1

See detests in les page p.20. 2º misserce Sun a planets tricke (24 cm) (P cm)







Mesin with 148 me The M fill and translated of the minute before them and were the with it may personal the file minute before them and were the state is many personal to send the state of the personal of send to be suffered to the state of the personal of send and the state of the state of the send of the state of the state of the state of the send of the state of the st

tendermens where whatever is said (is process) by signs) at me created table, and of the theory all, the months and offices it to be a possible theory and be there is not a possible the public adjusted of the adjusted of the adjusted of the public adjusted of the theory of the the and the process of the adjusted of th 1727 ISE

word lever those time of approaching perfection. When her has been been to the second the controller, and the second until the linie Ed. with accompany, were access on gree through, and the patholican received to gold right of citizen thep.

In I lete for more though them can sow by these commencial where the social life to different for one one I there commencial where the social life to different for construction of the social life to different to see the ready. The social to the construction of the first of the social life to the see the ready of the construction of the see that the see that the see that the second is the second of the see that the second of the second

"the fast of their contenden that will chief, concerns on is the such orient a mathematical bill which is follows much developed among their perfectionals as among one own, and fastle the law is materials of audient one much the towne throughout the bour typelom, their injustains been as a carefull that panalled to over any through different in delands, but their static as altogether of another kind their concerned their static as altogether of another kind their concerned the trace of the over ser are not like over for authorises the trace by whether or are accorded. They are for ourse along that they they there is that it saying the title: I take these witnesses, office to the course out to the course of the trace of the course of the course of the trace of the course (Here follows p 15% Tongright for the Neellona Consolle

The are able with much planning to amorning that old the

push of the proper letter the trivial bear bear under traction to a

hoose beared suggester and graphed . The are infrared being

push togethe hard the and unless from energy of the starts

that togethe and the deterophe will be in trooking of the starts

thought and the decourage much to in trooking the starts

or, christian technical latery, When and anyther one that the

or, christian the decourage was tracked to the Sellon a obtained

the start has the christian of the tricked of the Sellon a obtained

the contract has selled confirmed by the sellon a obtained

and the loodling in planning of the start with the sellon to th

The decise to tailings the parties to have of Botally obtained by the surgeon of the parties to have of Botally obtained by the surgeon of the parties of the surgeon of the parties of the surgeon of the little had been inferted as to them with the transfer of the little had been inferted as to them only of the surgeon of the little had been inferted as to them only of the surgeon of the surgeo Continuenth with word 1/2 billion occupies 10 th eccupies 3 billion occupies 10 th eccupies; and J 3 billion occupies 10 th eccupies; and J 3 billion occupies 15 sect; and J 4, 1920, and led f 5 24 The lentrace was sent in tooth a forested described in they record, a distribution of first or the world, or additionally very fine files while I be while

by with her how went of projections deries of formentations as desired for the following the said of projections are difficiently as defined in the market of the later?

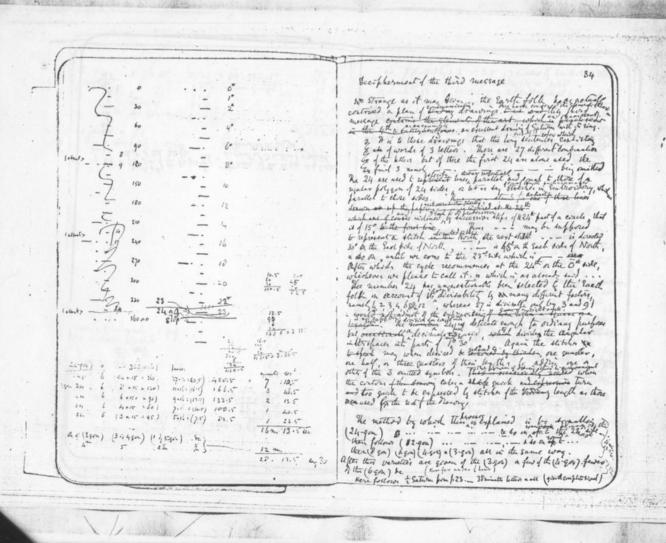
as in the following the first projection are to follow a so that the second former of the forth and the former of the following the forth are forth they start for account to and that the best of the forth accounts the forth market forth or the forth accounts the second for the forth accounts the forth accounts the forth accounts the second for the forth accounts the specific could set of the second forth of the s To work mentioned in my lack letter that the wint of these in the Sault.

We was mentioned in my lack letter that the wint of these and in the street of the We - is the most to of god entry stoned we may premie for "equal to" and the last come for the hundred.

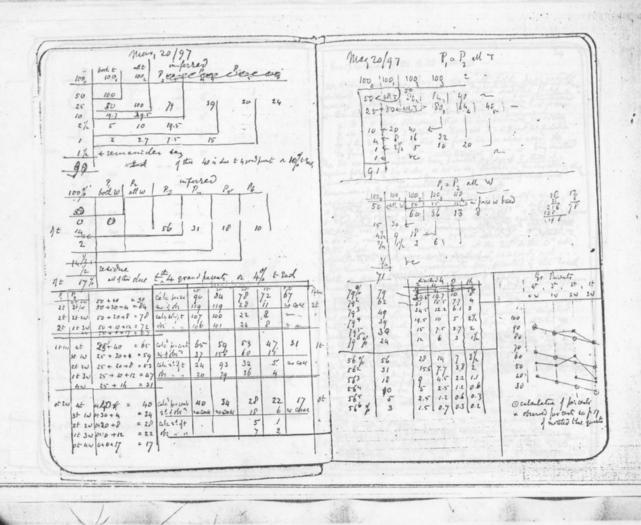
Are presented in the transit out contample by the next that of tenting. He has been for the transit with a last to be presented word or a little to be properly the reader to the hardes, the presumed word or three stepented in which withing brackets. When the word of these white there is it will be provided in which the word of the word of the second growth of endered in form a new word of bledies whether in the property of endered in the watch it of placement in these which is interfected and the watch it of placement in these which the controllars of the testing the steel of the conventures of the steel provided in the controllars of the testing the steel place the steel provided the steel steel provided the steel provided

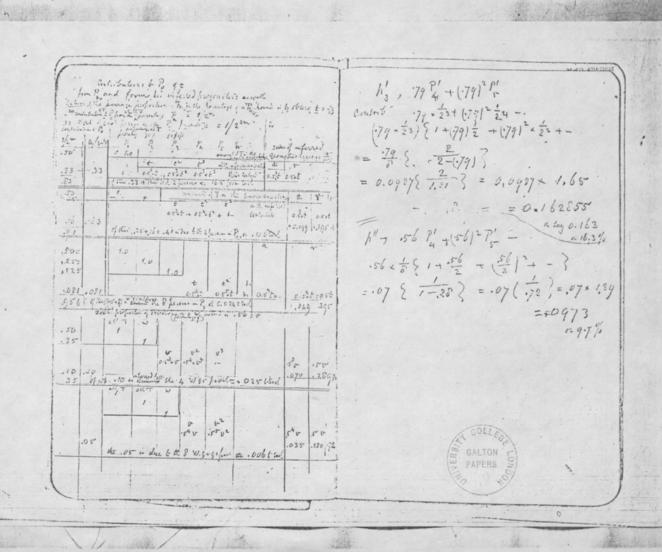
Ells 9 2 45 45 25 determined 155 2 4 Herosolay 2 = 3.5 7 divided for 3 = 2.475 382 3 dispersional 3 5 dispersional 3 dispersional 3

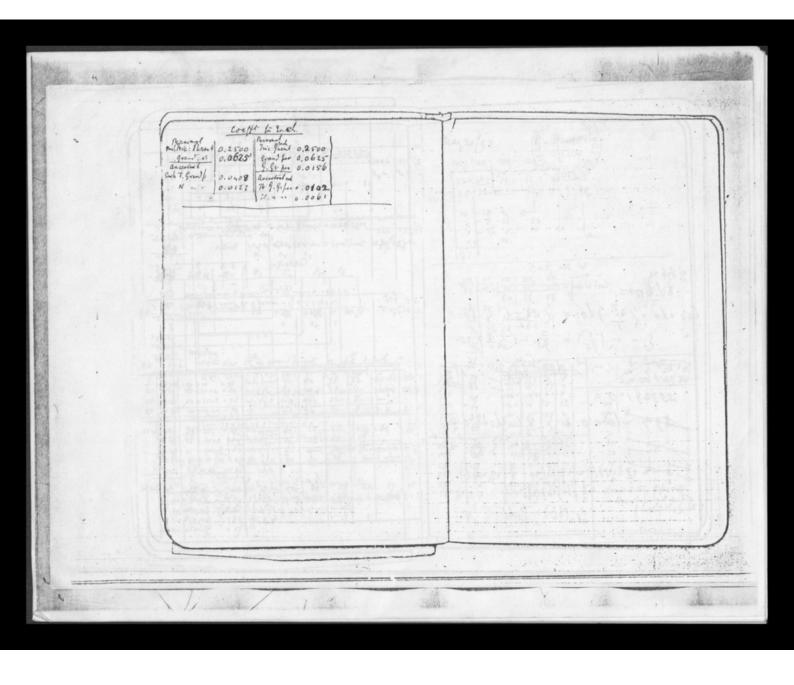
This group of sections occupied 24 minutes Think indo with beating the state of factors of the state of the state of the state of The next grown in the second recting is comparation the entertienty in 18th but is a success of twenty the extension and twenty the exploration may represent that we shall be a tool described with the second restriction with weath of the post of the state of the same to any track the but but buffy to want of time, past on a long dispatch in tapes requires time I wint in a post of any of the data we are some first of a like but in the specific and the worder of the terms of the second of the like second of the second of the like second of the 944 45 55 0 412 12 (6 x tan 82°. 20') 1 28 h to the thing the 12 graft Whith the ton that the bidy of the figures are is Such asses to the as well for the bound of such to the soul of such to the above of the state of the soul of the the erica if the 12 gen is 4 hours an great of it entered a rearry POWER TO BE



He successed in the shambs is there by excisence triangles with the shambs is there by excisence triangles that to the following the state of the shame a triangle that to take of gds, 36, 72, 11 am \$1,74 (new with the shame) of the state of the shame o 360 52' +:" 150 56 - 1902 290 1 21 4 14 1590 18:19 1: 2:120" . 2 = 16 = 11 412 framfle , . 9 " Solar tystim at the time of toursonteen and in the histories of brockets and ing the histories a diagram of some sunfle of paratus Cubrequently, 5 h - mis) was a core of features, such taky its term after affecting him 3 forman over so that the complete circle overfice in no no say a that the complete circle 中国现代的

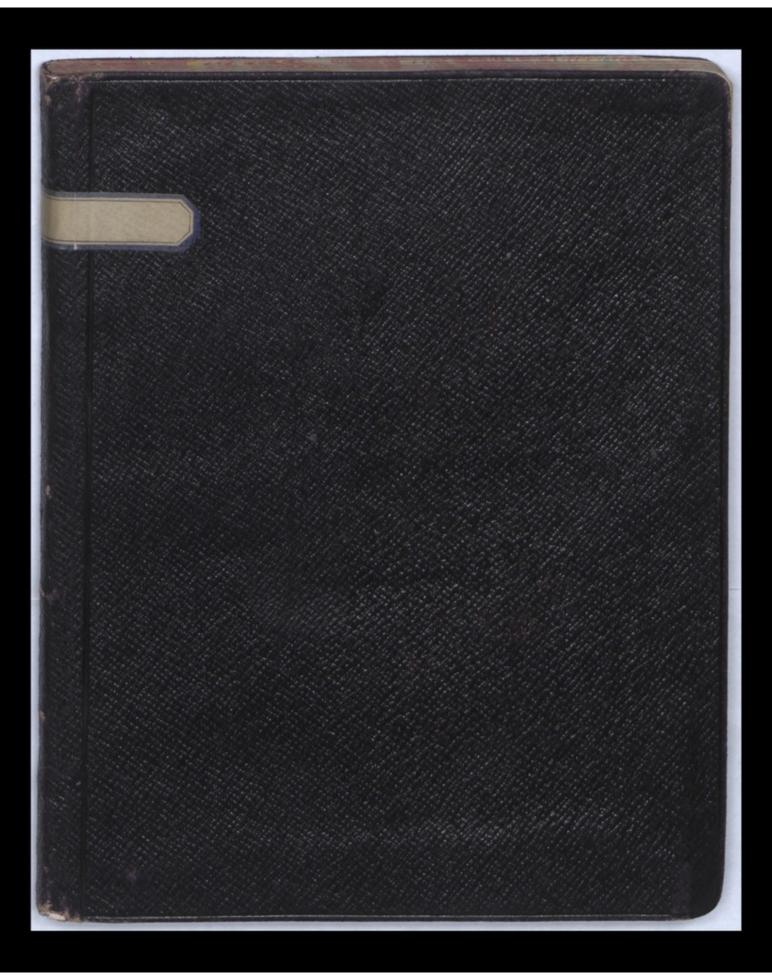






	13 73 72 70 69 60 67 66 6 6 6 6 6 6 5 5 5 5 5 5 5 5 5 5 5	
5 1 Quart medias 5 2 quart	He 103/2 125 125 125 125 125 125 125 125 125 12	From
1	Male Male auabs	Fried
his is	adul	Report.
Write of Section	1 male. 1 m	(ablis)
A 379600	23-500 Telue (1) 15 22 37 24 h1 44 105 57-162 37 233 59 292 37 329 122 351 17 368 17 374 2 370	anthrop
4	female des 1000 1800 1000 1800 1000 1000 1000 100	i Cu
To make the	20-50 446br 38 40 47 55 54 59 60 62 60 62 61	

f 46br



gi)= flv

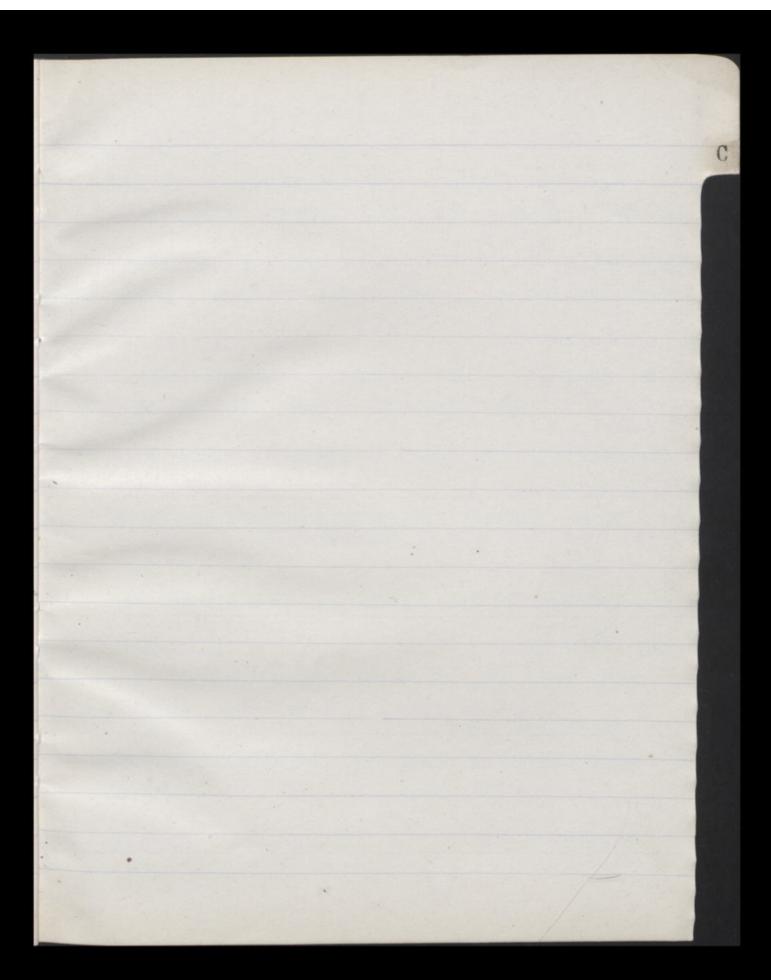


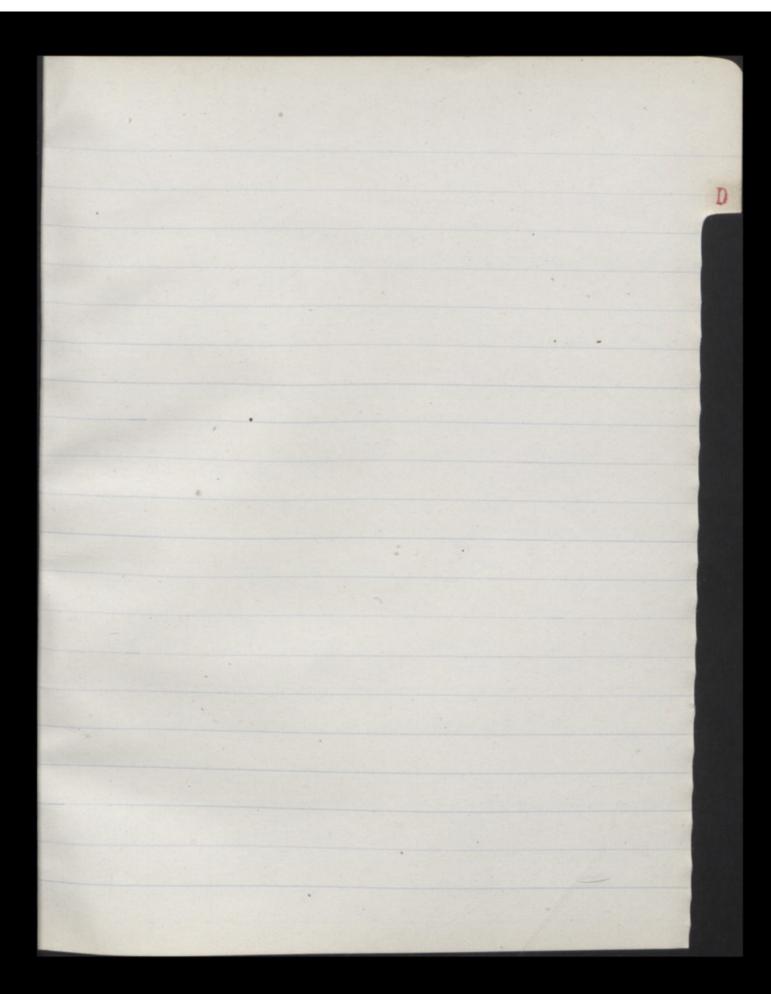
Mortlet - Biggs A.8

Eva (1) 1

Gallon - Bunbury

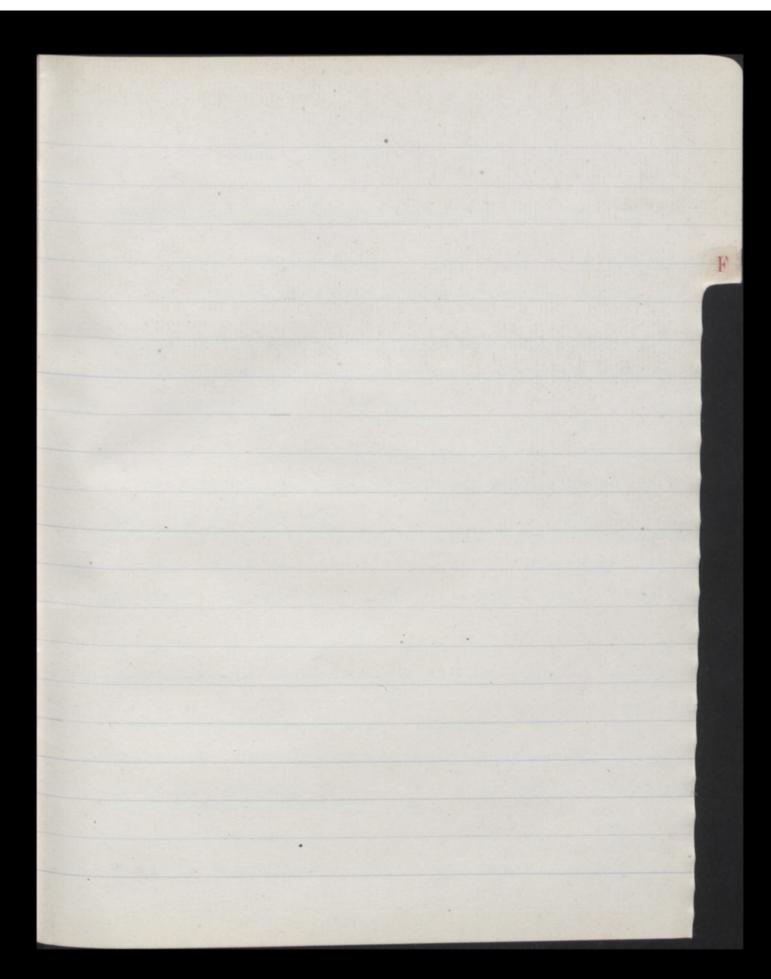






			M	F	
				-	f stv
Malthews -	Ewart	B 2	(2) 4	-	Kath 9 (2) 3; agatha (2).5.
Katherine	Urtliam				Norther St. Verning
		1	1		
					the state of the s

.



Barday - Galton A. 4
Barday - Galton Habert A. 6

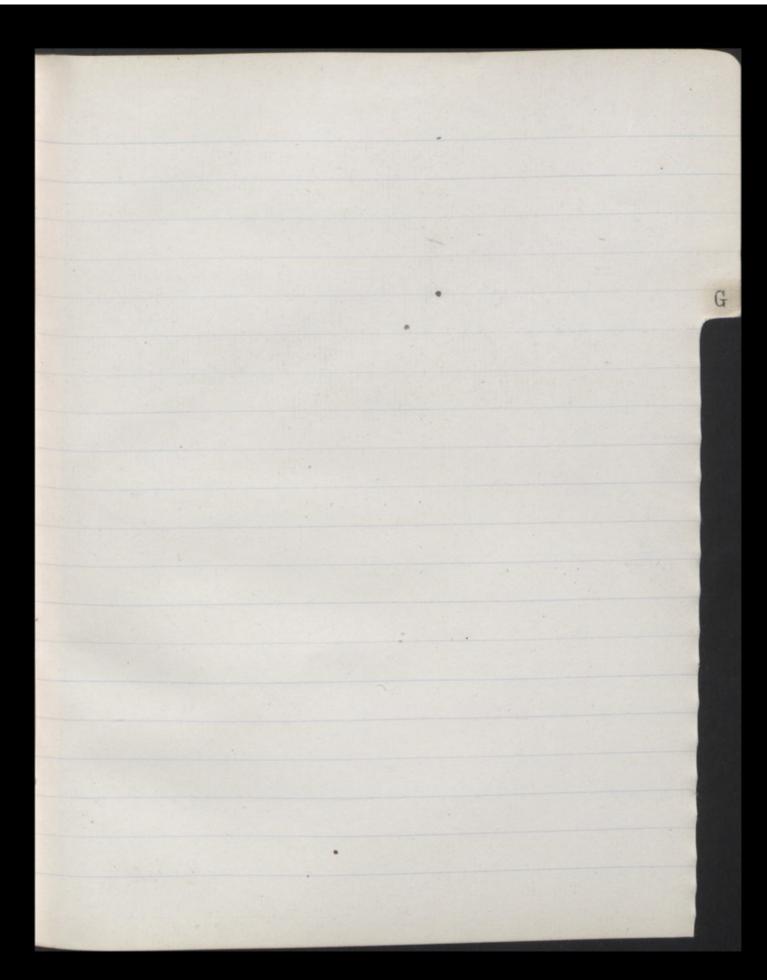
Sarwin Galton Habert A. 6

Movieta Galton S. T.G. A. 5

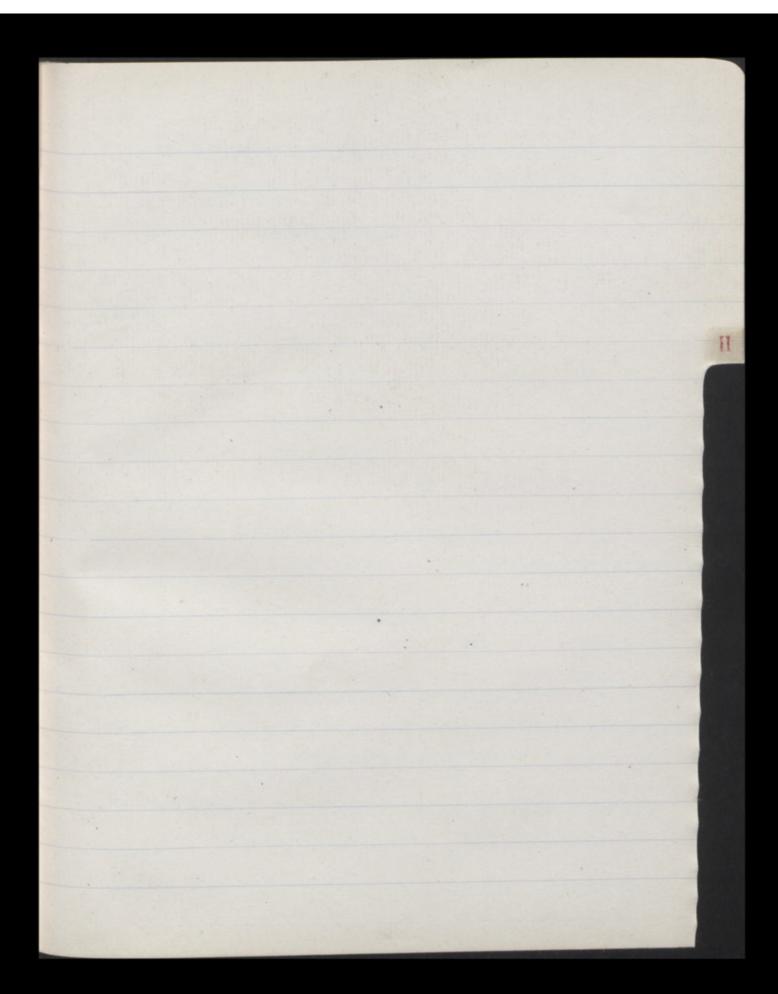
Movieta - Galton A. 2

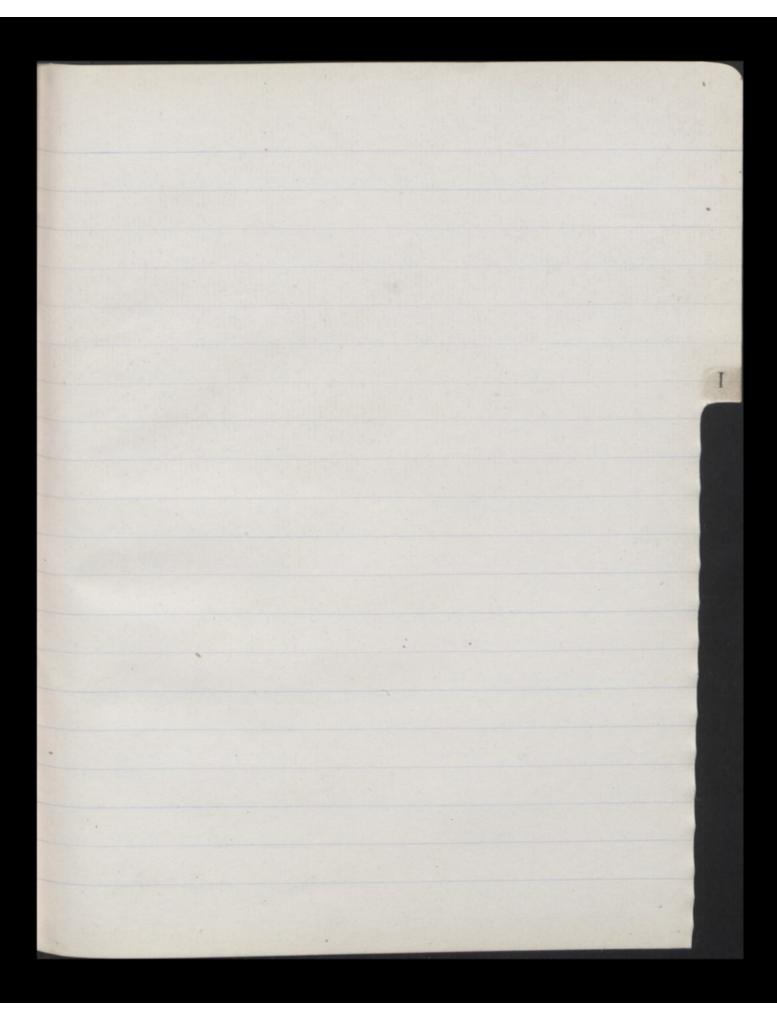
Strutt - Galton Howard A. 7

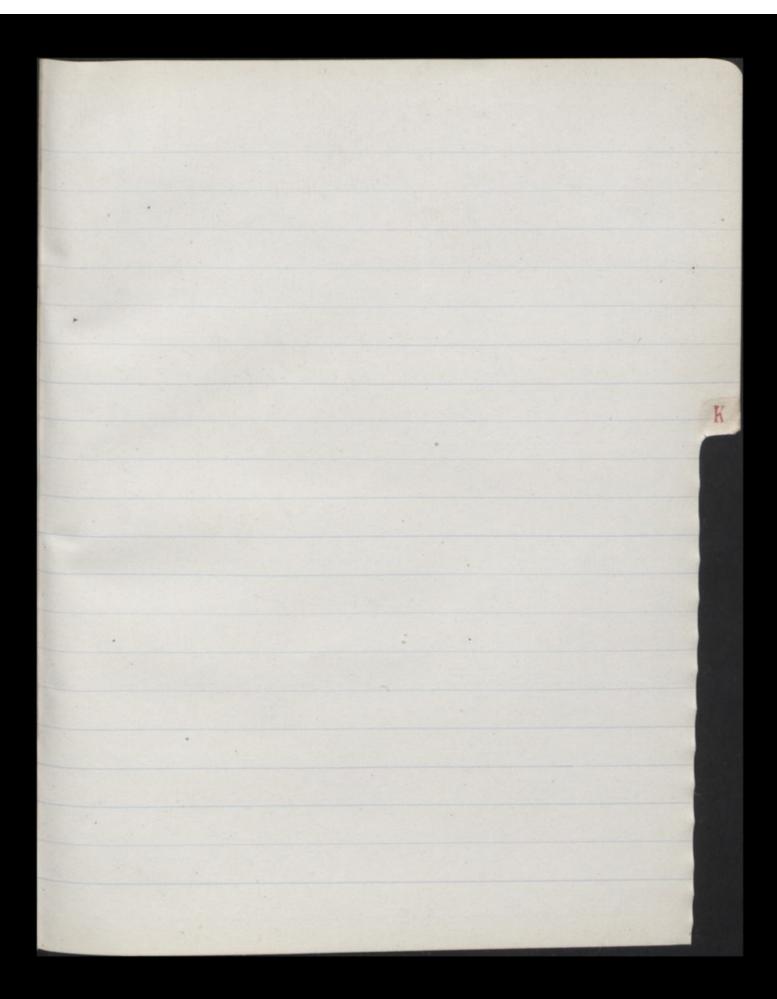
Evernus (4) 1, Francis (1) 9, Evan Cameron (1) 10, Vera (1) 11, Vidlet (1) 12

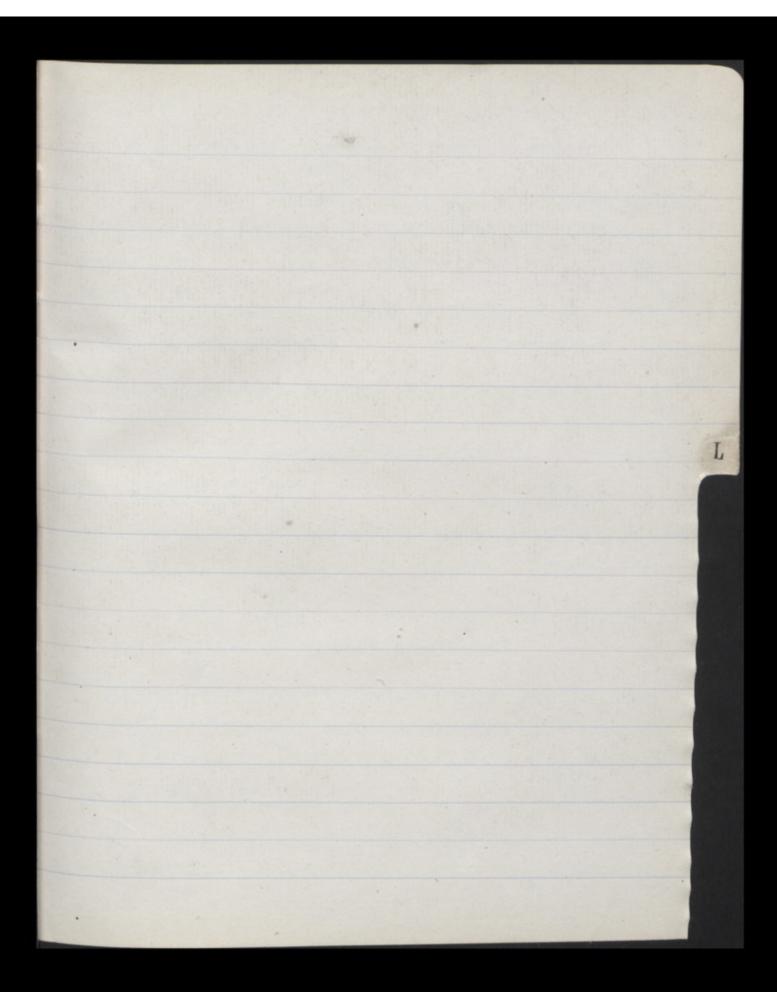


		M	F	
				f. 26v
Bence - Heygate	B. 3	(2) 7		
,				
1			1	



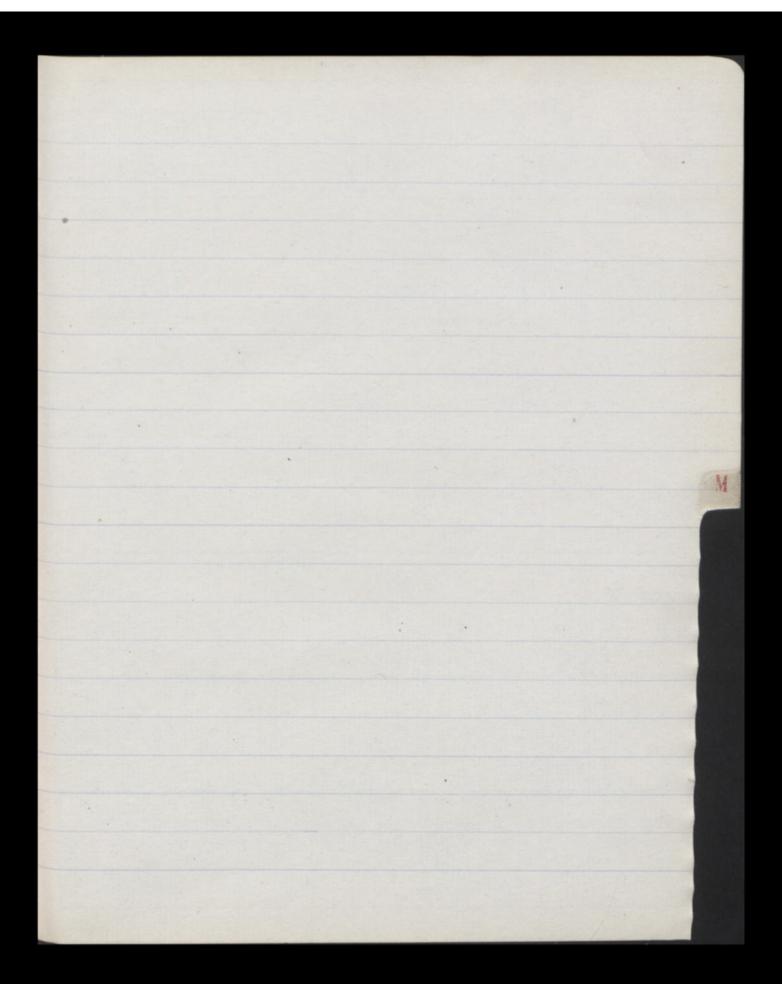


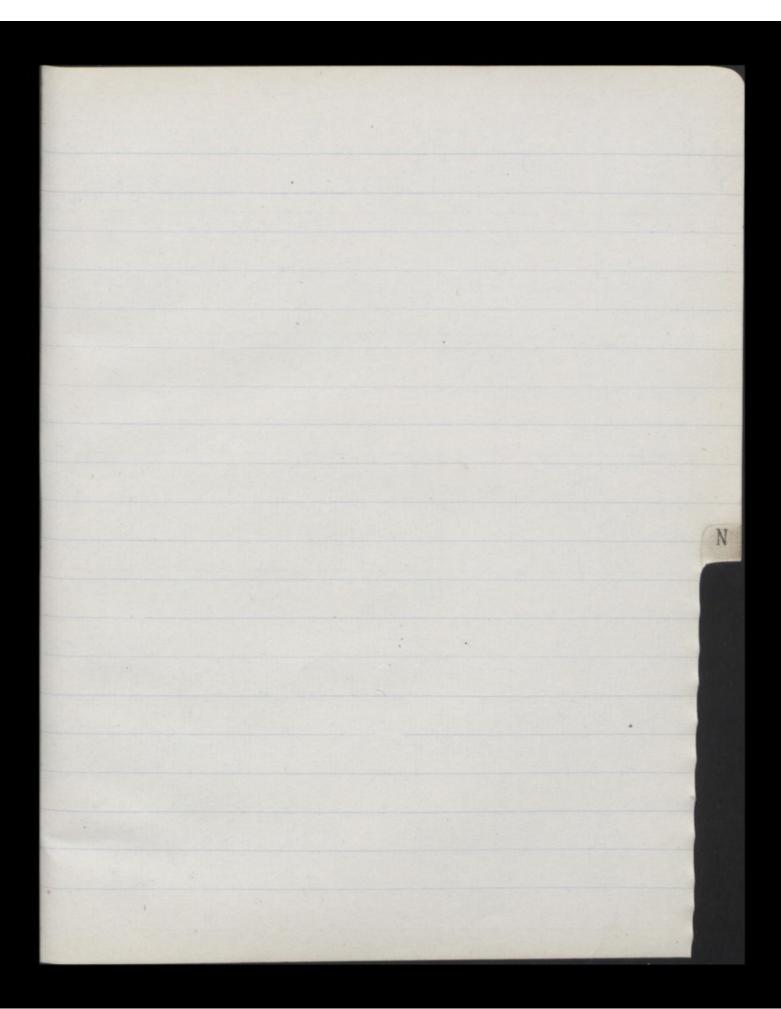


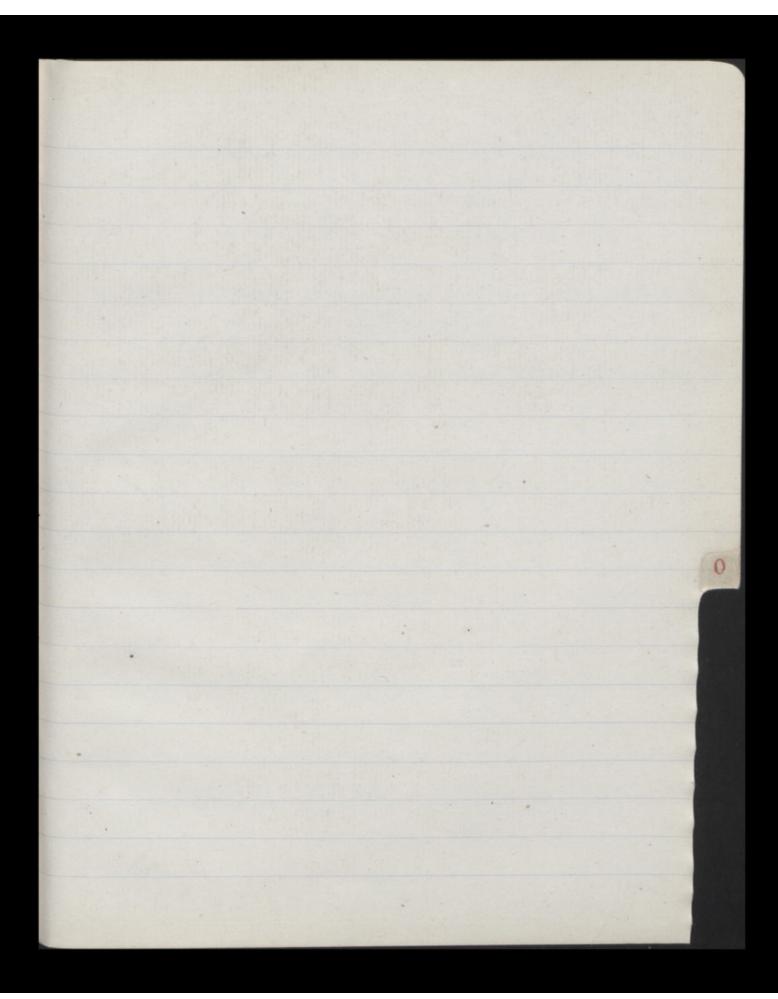


Ewart - Miller B. 4
Kall da Horace russiletic B. 4
Galton - Morilliet A. 3

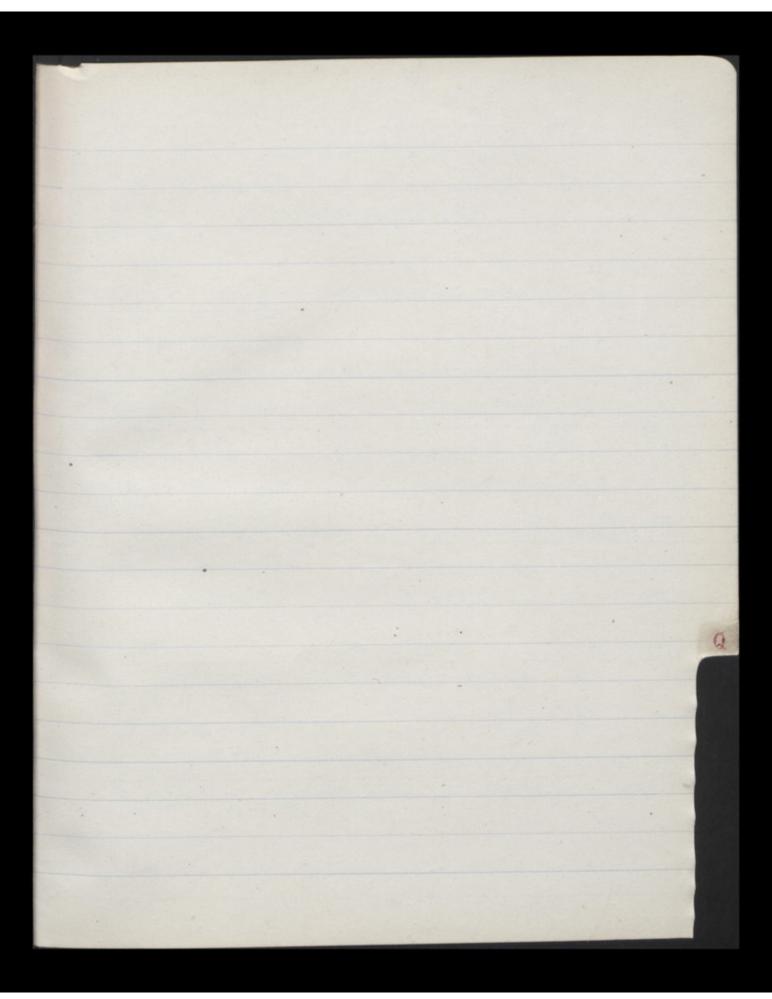
Magdelen (2) 12



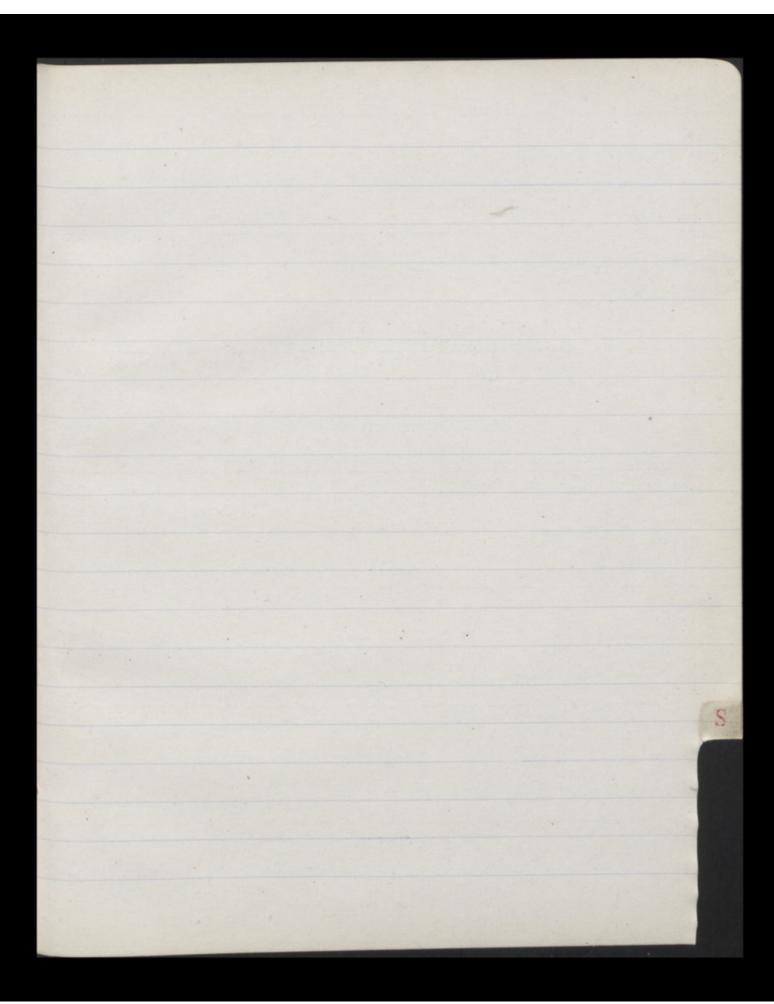




P

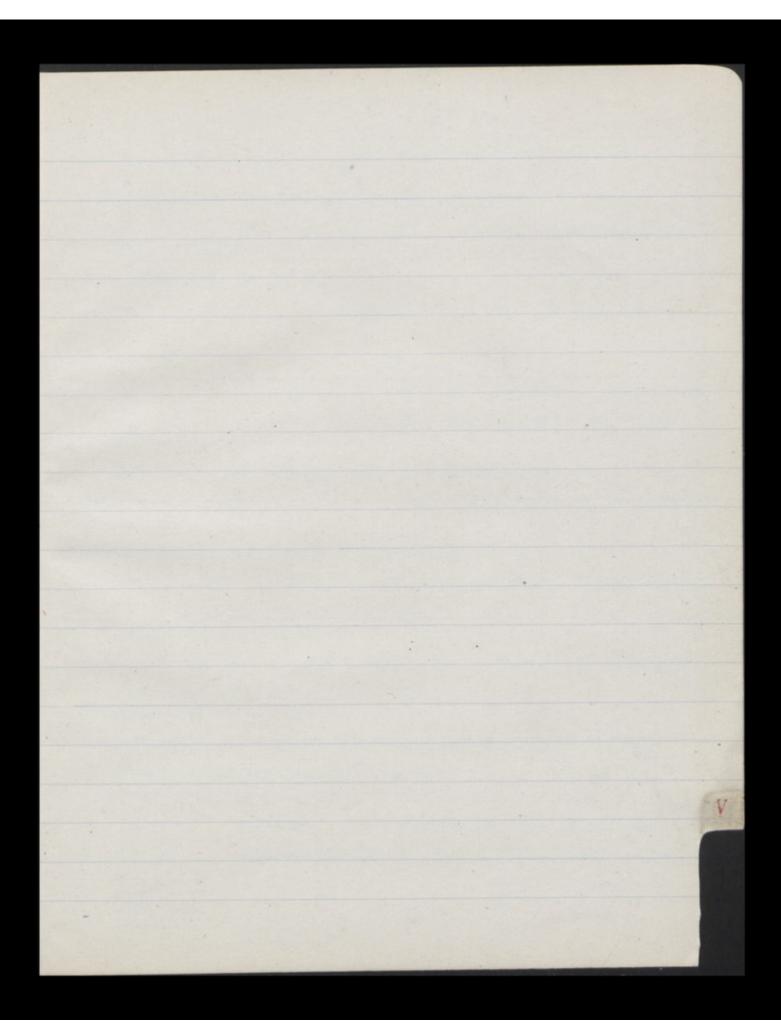


R

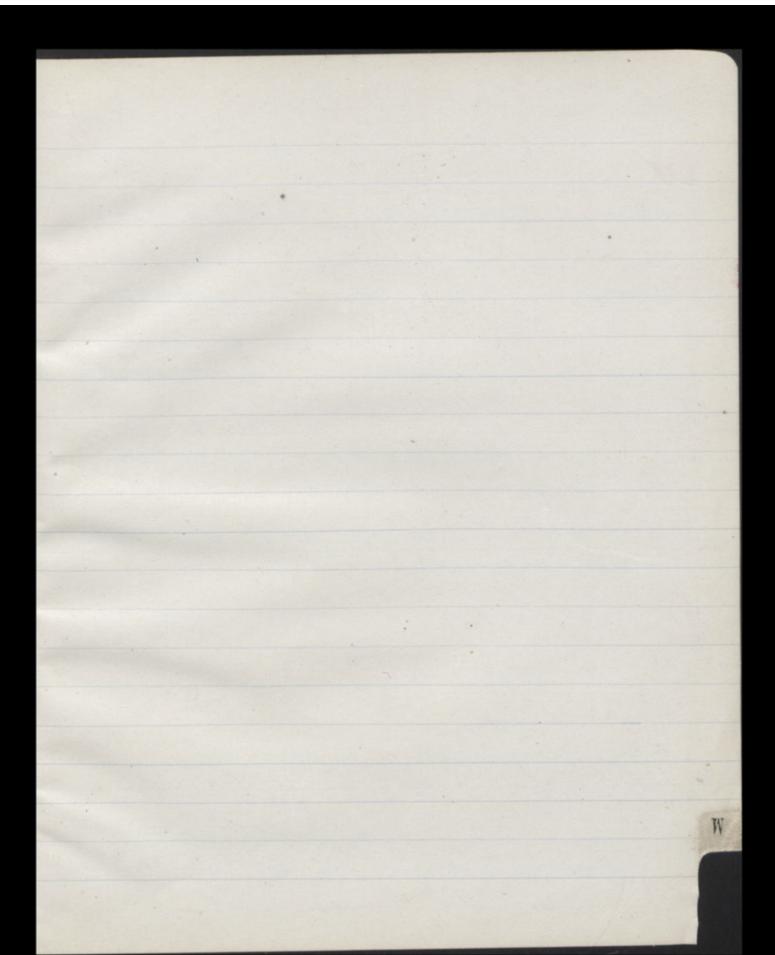


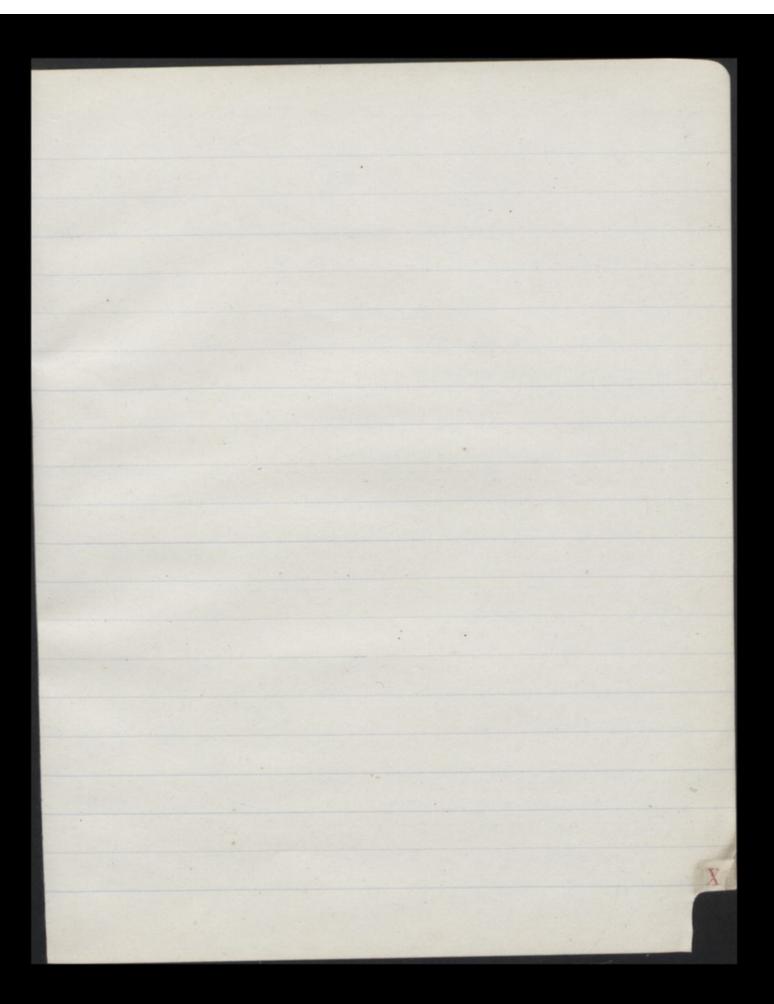
T

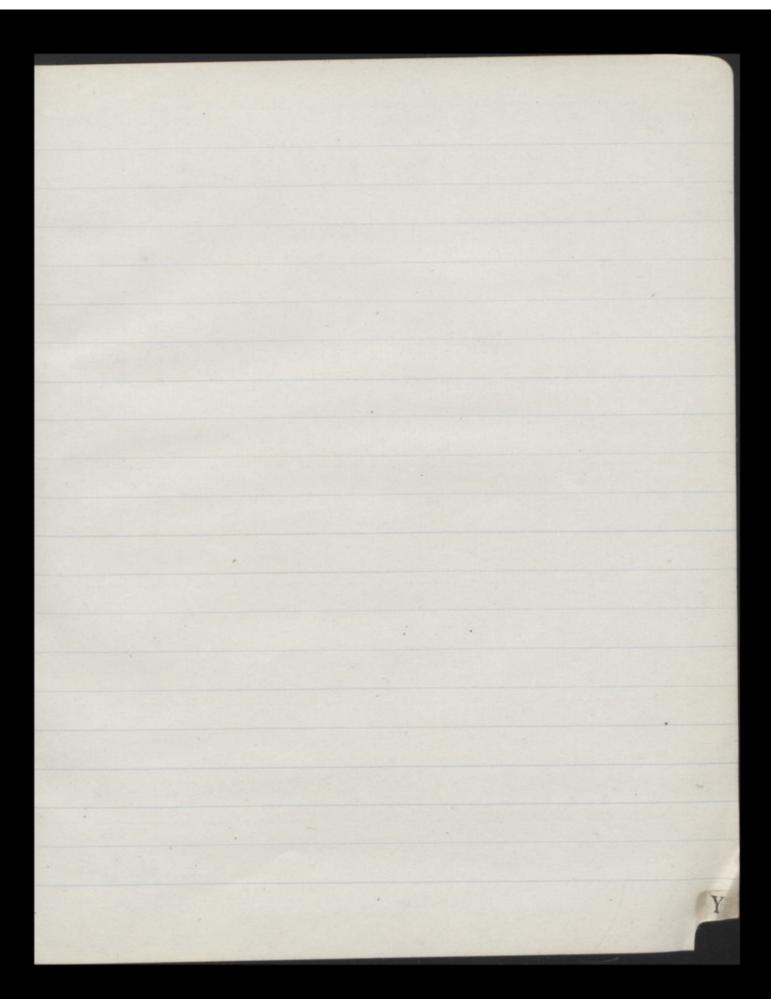
		34	F				
		M	7.				
	1			f 62v			
				f 62V			
Lugar Van		U. H. N	нм:				
months - Vernon	B4	(2).3	(2)-2	magdalen In:(2)12			
Kath. Dor H.m							
miller - Vernon carotine Trimer Haygate	15.1	(2) 1	(2)/2	Lathorite Do West name next Home			
Themas Heligina							
				Y			
		and the					

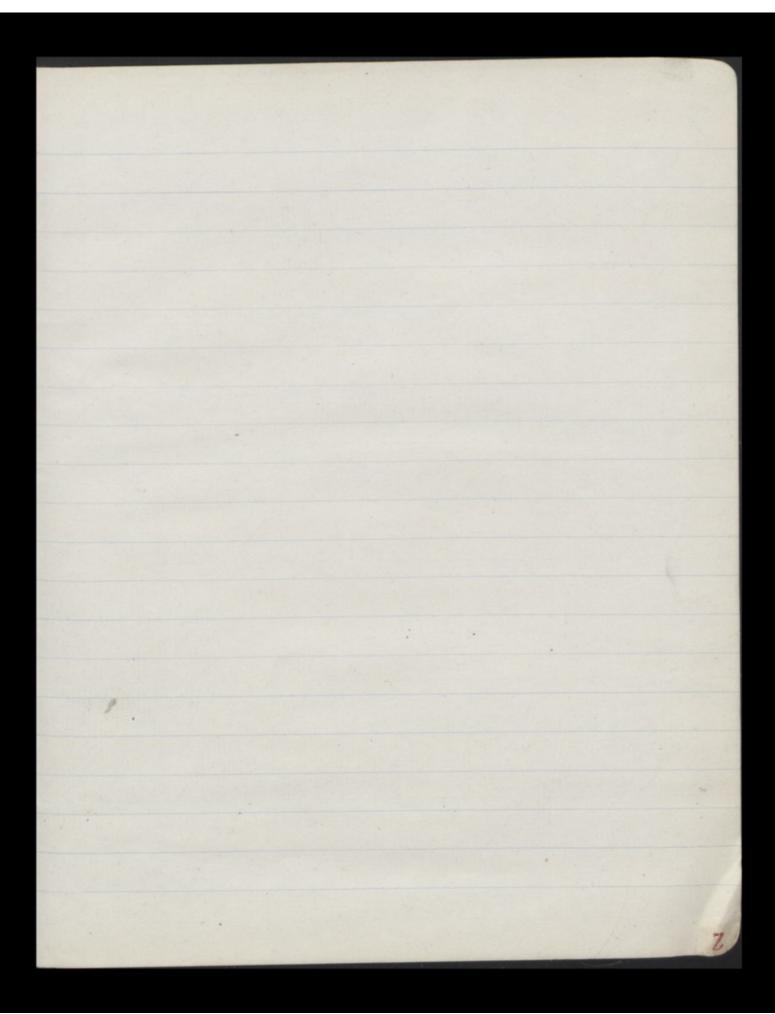


Suff anne - Wheler Edw. 9. (4) 3. Collins - Wood C. 3 (3). 8 (3). 7 may (3) 11; John (3) 9; Forsthy (3) 10











CHEAP "SECTIONAL"

DRAWING AND TRACING PAPERS AND BOOKS.

Messrs. LETTS, SON & Co. (Limited) have pleasure in calling the attention of the public to a very cheap series of Sectional Papers, &c., on which plans can be drawn to scale and colored without the ruled lines showing objectionably through the work. The paper kept in stock is of the drawing medium size, ruled in squares of \(\frac{1}{12}\), \(\frac{1}{10}\), \(\frac{1}{5}\), \(

Price per quire where less than a whole ream is taken.	Medium.	6 8 8 1 3 and Medium	, Medium.	Medium.	10 Medium.	Medium.
[at a time For 1 quire ,, 2 ,, 3 ,, 4 ,, 5 ,, 6 ,, 7 ,, 8 ,, 9 ,, 10 ,,	5 6 3 6 5 5 2 1 5 4 2 1 5 3 2 5 4 7 2 6 4 6 2 4 5 2 4 4 2	s. d.s. d.s. d.s. 06 03 66 64	d. s. d. s. d. 0 7 0 4 6 0 6 10 4 4 9 6 9 4 3 8 6 8 4 2 7 6 7 4 1 6 6 3 4 6 13 10 3 6 0 3 9 2 5 11 3 8	s, d. s d. 7 65 0 7 3 4 10 7 0 4 9 6 9 4 8 6 0 4 7 5 10 4 6 5 8 4 4 5 6 4 3 5 4 4 2	s. d. s. d. 10 0 7 0 9 9 6 10 9 6 6 9 9 3 6 8 9 0 6 7 8 6 5 6 8 3 5 4	8. d. s. d. 12 0 9 0 11 88 9 11 48 6 11 0 8 4 10 8 8 2 10 4 8 0 10 0 7 11 9 9 7 10 9 6 7 9

Architects, Accountants, Actuaries, \(\frac{1}{10} \) and \(\frac{1}{8} \)

Builders, \(\frac{1}{10} \), \(\frac{1}{8} \) and its proportions

Civil Engineers, Clerks of Works,
\(\frac{1}{8} \) and its proportions, and \(\frac{1}{12} \)

Draughtsmen and Designers, \(\frac{1}{8} \) and its proportions

Engineers, \(\frac{1}{12} \), \(\frac{1}{10} \), \(\frac{1}{8} \) and \(\frac{1}{4} \)

Furniture Manufacturers, \(\frac{1}{8} \) and \(\frac{1}{12} \)

Iron Founders, \(\frac{1}{6} \), \(\frac{1}{8} \), and \(\frac{1}{12} \)

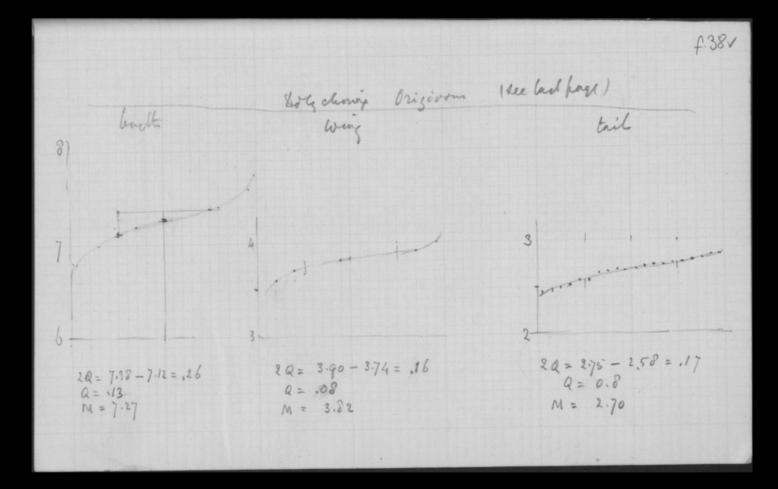
Iron Founders, \(\frac{1}{10} \), \(\frac{1}{8} \) and its proportions

Joiners, \(\frac{1}{6}\) and \(\frac{1}{8}\)
Mechanics and Mine Cos. \(\frac{1}{10}\), \(\frac{1}{8}\)
and its proportions
Oil Cloth Manufacturers, \(\frac{1}{10}\)
and \(\frac{1}{8}\)
Porcelain Works, \(\frac{1}{0}\) and \(\frac{1}{8}\)
Quarrymen, \(\frac{1}{6}\) and \(\frac{1}{8}\)
Quarrymen, \(\frac{1}{6}\) and \(\frac{1}{8}\)
Railway Companies, \(\frac{1}{10}\), \(\frac{1}{8}\), \(\frac{1}{6}\), \(\frac{1}{3}\), and \(\frac{1}{6}\)
Tile-encaustic, \(\frac{1}{10}\), \(\frac{1}{8}\), and \(\frac{1}{6}\)
Upholsterers, \(\frac{1}{8}\) and \(\frac{1}{8}\)
Weavers, \(\frac{1}{10}\), \(\frac{1}{8}\), and \(\frac{1}{6}\)

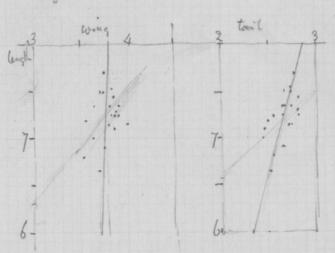
A complete set of samples and price list, including Tracing Paper, will be forwarded on receipt of three postage stamps.

Francis Galton 42 Rutland Gale London.





Solyshouix ornzeron, allem bird of Florede p. 211 Wallace Barwerin p 524



corresponds to 1/20 in way

+ 14 in levelt

I si length to 4 in tack I si last to g is weing toleviation in wing to at covardends to 8.5 in tail

tail 3

2000 Family Phthinis
Regard Thompson 1,22

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

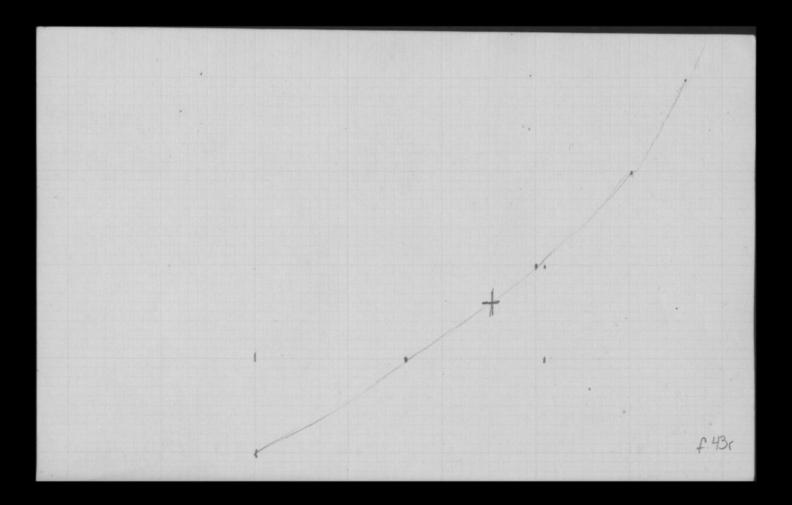
1000

RFF Pairs of brothers taken at earstone

P.E: 1.87 $\frac{187}{1.61} = 1:33 = \frac{1}{1} = 1:28 + \frac{1}{3} = \frac{1}$

Protonal defeat beich 223

Interpret 36 P.E. 1.8 from booken lost, heroom, at samples.



10 Schools The Heart 14 forth

Swortlash Motors

Swortlash Motors

28 hale

Swortlash Motors

10 jule

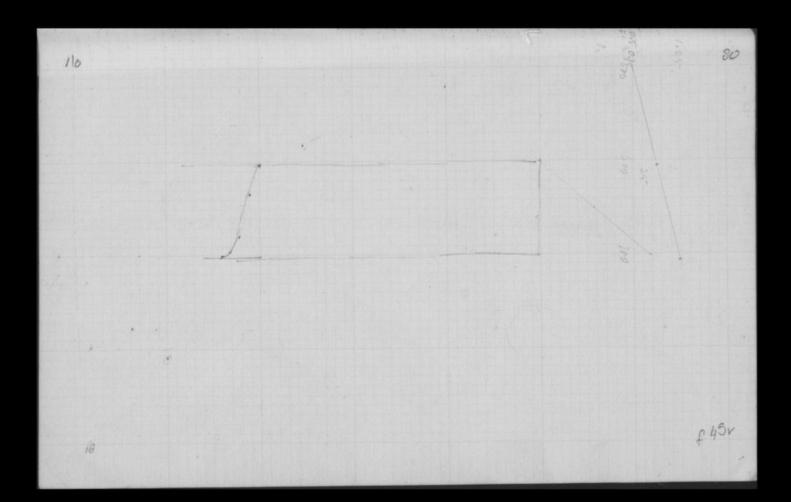
Swortlash Motors

10 jule

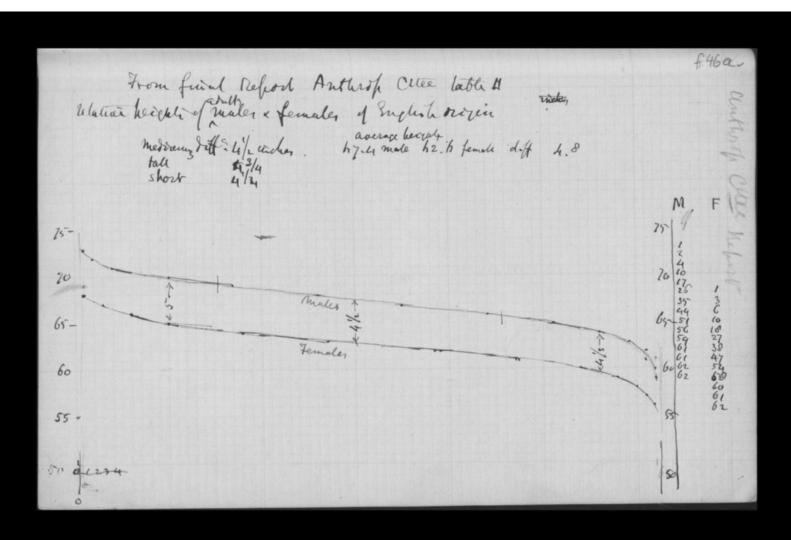
Swortlash Motors

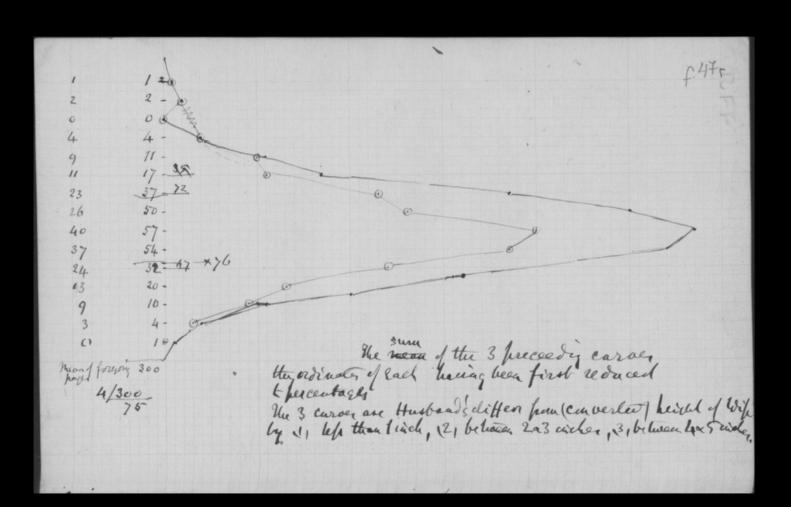
Swo

Protection of 10 11



f 460c1 Fraternal choralis 2 1/2 2 1/2 2 1/2 13 3/4 00 31/4 1.1 100 care The Unisect lot. means 5.11 xaboal 34 13 2/2 0,5050505050 an the 295 thecral cases orthognartich differ = 21/2 4.5 the 4 thortest 51-2 - 51-5 wellegen) 120 care interquelle: 2/4





64 00 75 50 63 00 75 50 62 00

Height (Husban) differ left than I cad from converted) height wife. f.48v 75 1/120 10 0 10 (61 17 (0) 21 (3) 28 471 a single maximum but the maximum frequency 34 (21) does not cornaide with mean the curae is not symmetrical (14) 23 50 000 4) 165

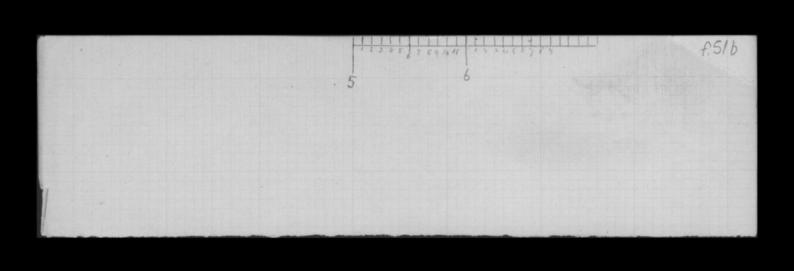
above : £491 72.0 - . 71.0-10.0 -690. >60.5 . 68.0-4 67.0 -66.0 64.0 below :

£492 Se Candolle 1.72 More 1 Monly Forely hace Por protifi veraciti order idefendence 32 Poller hier family

Height of ancestor & about a below men. that of his hercentally a sucception severations is as below $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$.

son 22 33 4 5 8

f5lar 6



Kurmen & feel eldest soms (white) 6 feel no f52, 4 feel oney Carey 221123212 no Kuntuen 2000 no kentinen elder or gorge unknown 7 4 6 8 10

f 52 v 28 15 280 C 252 Squares 255 253 spara 6: 585 36 finderin = 0.90 locial vit(3.3) = 1.65 15×10 al 11 \$3.3) = 1.65 120 225

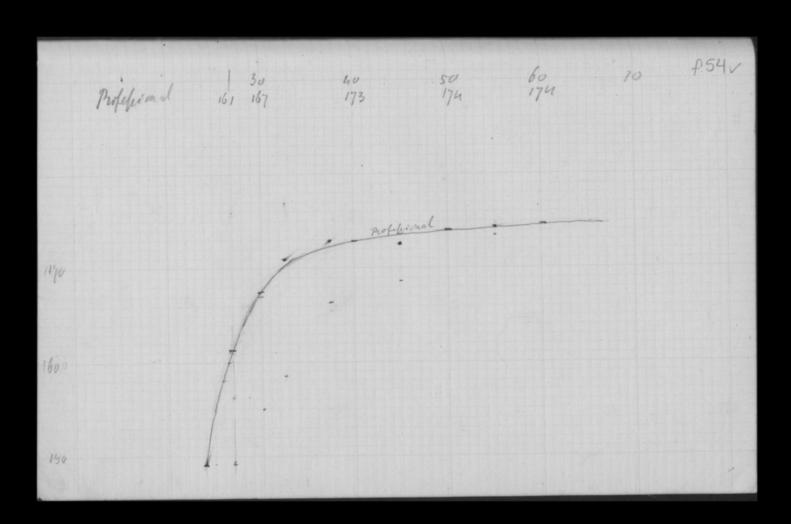
0:165:1:20 200 225

90/165 (1.8 too mod by far 2/55 have fith 1 "reclingle 165 (1.8 too mod by far have fith basing 25 x 9 15 mass 90:165:1:2

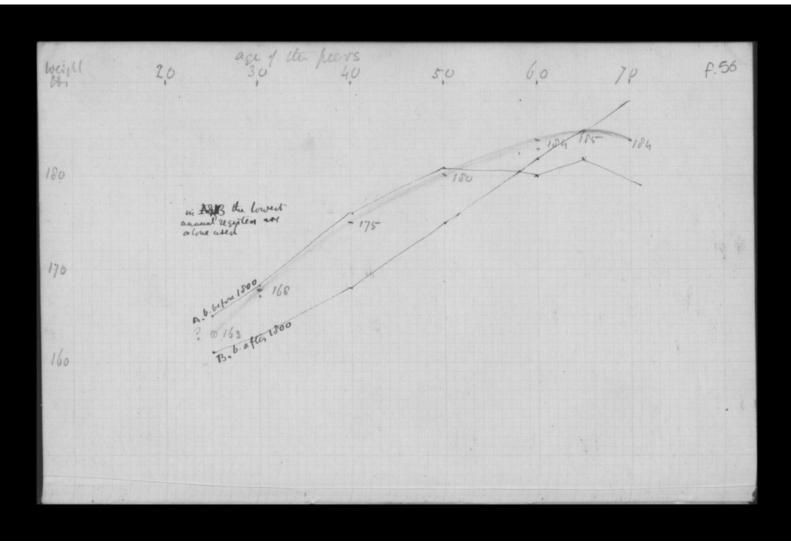
. .

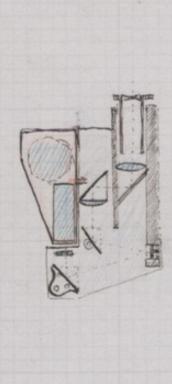
f.53v 5.

6.1 f.SHr 0,2 0,3 0.4 06 0.8



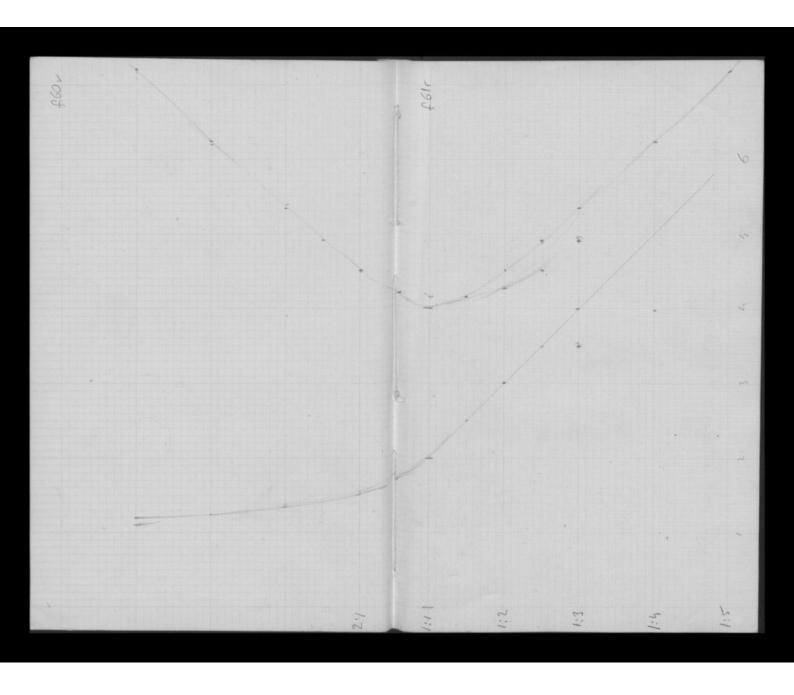
growth in weight £55v 6,0 40 50 70 11-] -[] -I --01-180 -11-77, 111. 11 -Tп. 17. 170 -III-TV,I. 160 -150 -

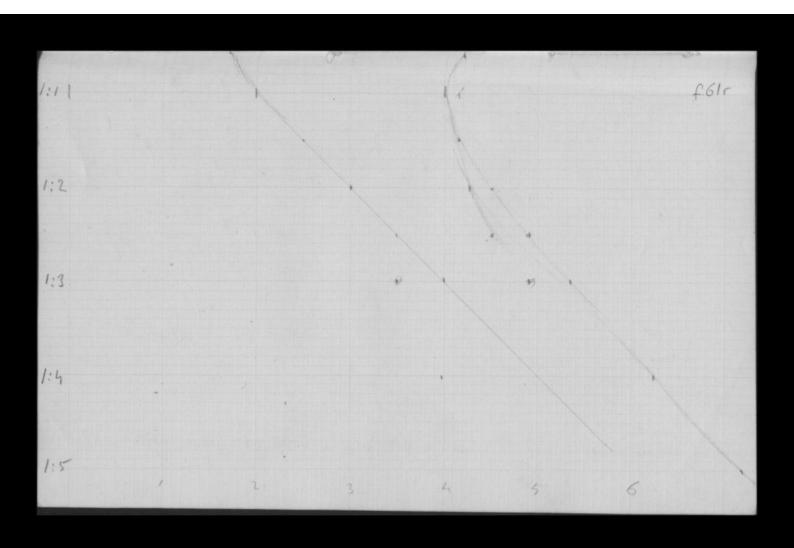




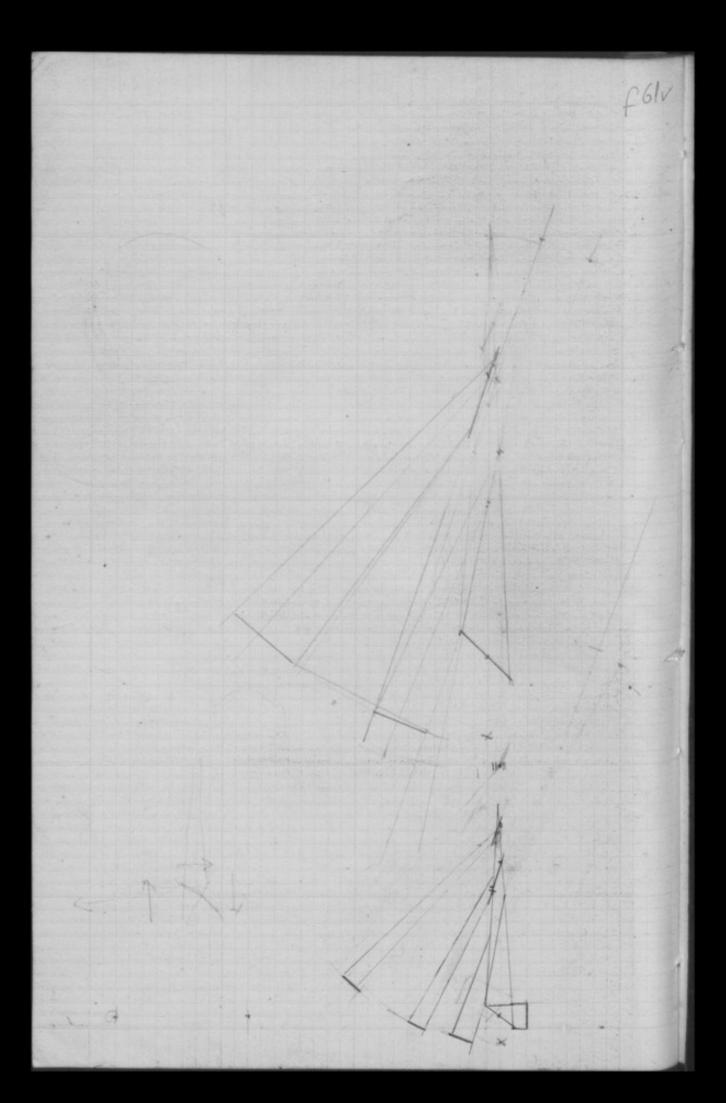
f 59r

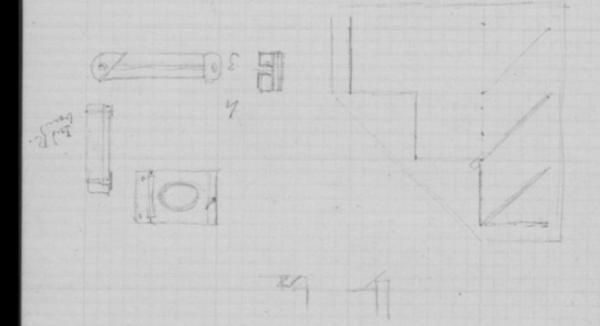
f.531

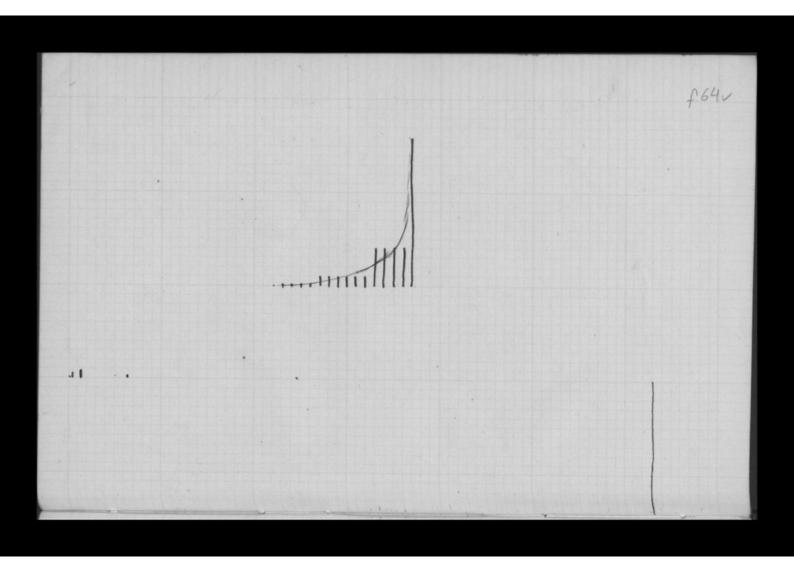




£60 × 2:/ 1:11 f.61r 1:2 1:3. 1:4 1:5







....

.1 .

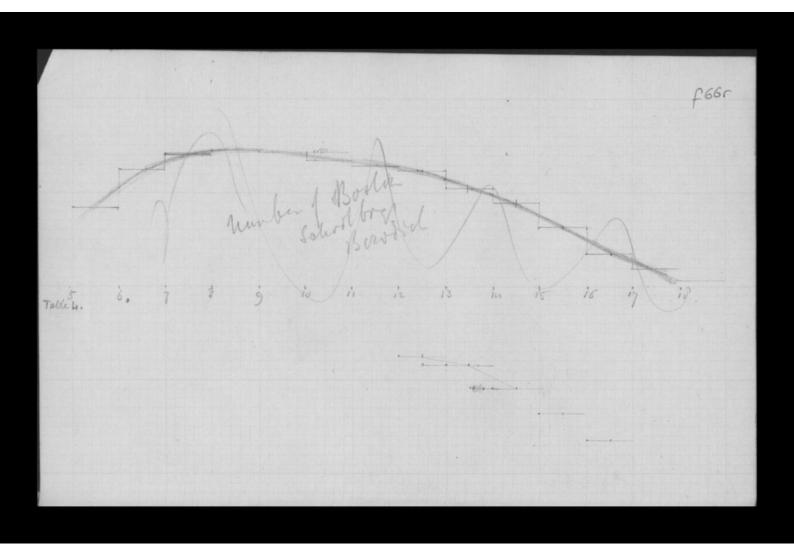
Ecometric ogian

This is the one fustracted 1 & 15 20 15 6 1

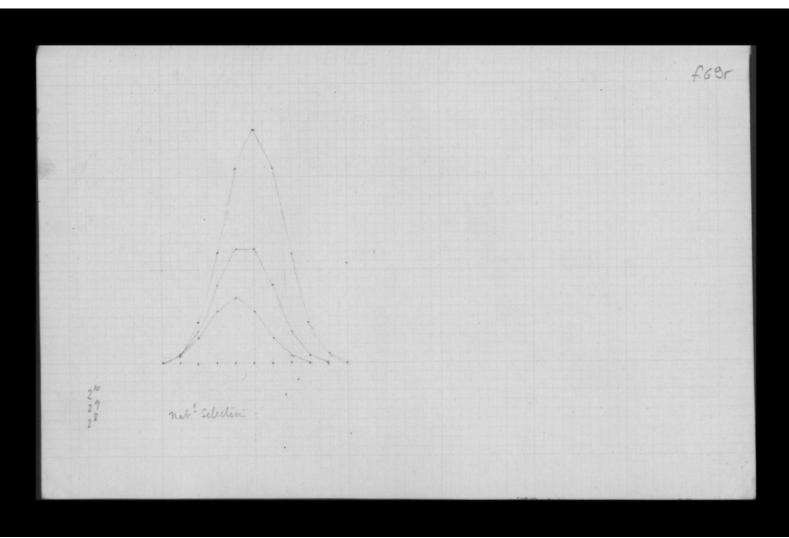
.....

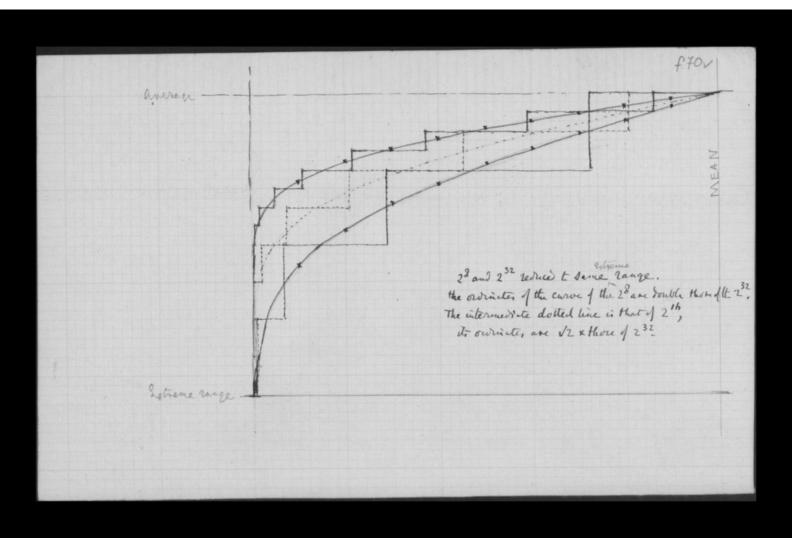
£65r

f. 65v

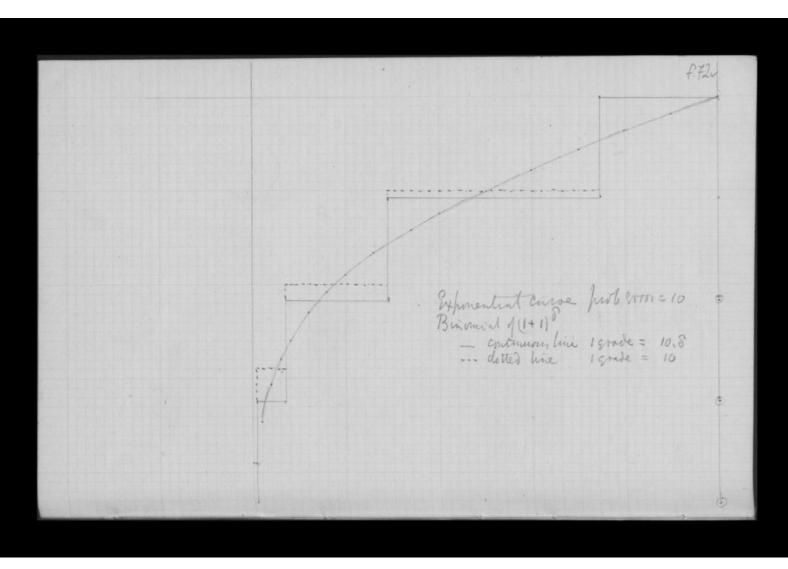


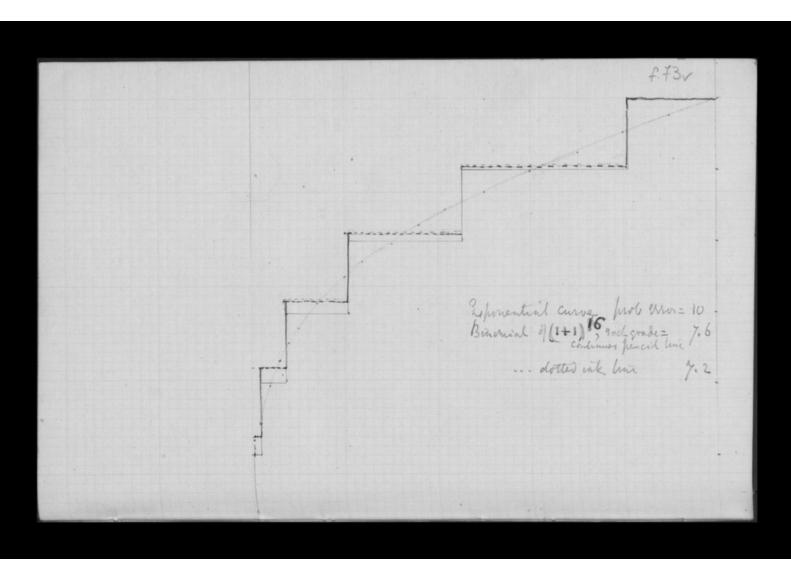
Criminaly. Habitial and Forst offence Heights Portimenth 150. Total 2400 pad sot Chullace 150. Pentinorthe 100. Habitard criminals First Hences Lion caker 3. Prisons 400 cakes 3 Prisons feet 10 First offine Height, arithmetical means Hubstinals Chathan (150) 54.5 Calculated & the persons Penton ville (100) 5. 4/2 who drew of the returns 5 61/2 Portsworth (50) 5 4/2 F.67v

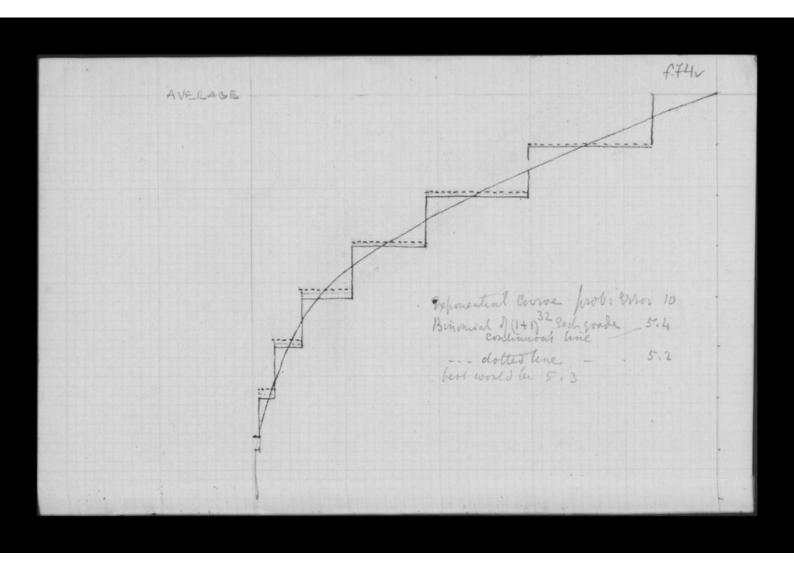


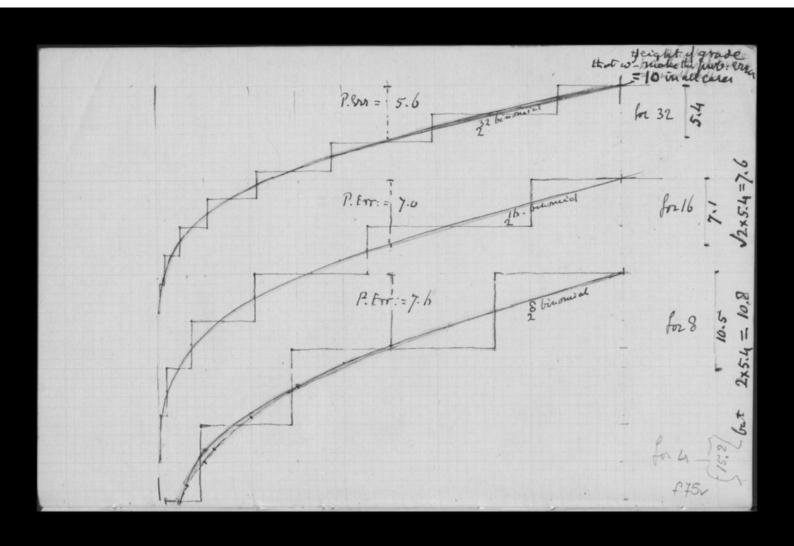


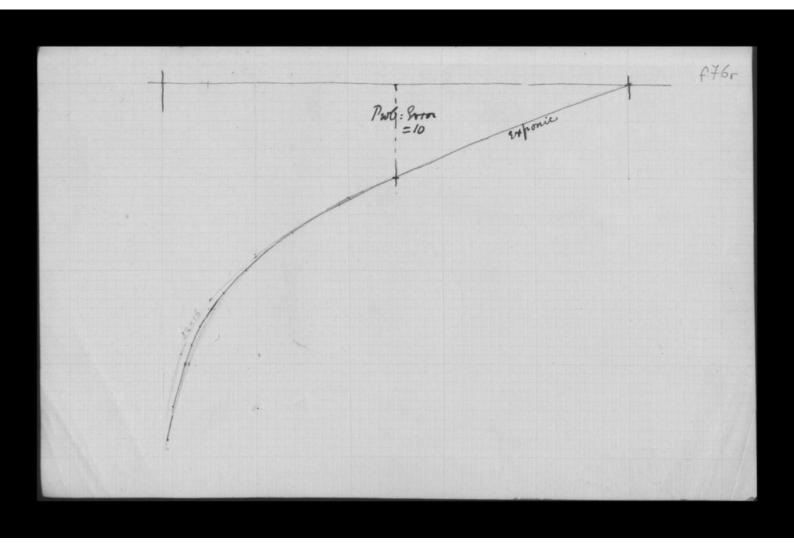
fflv Exponential curve prob bron = 10. Binomial (1+1) 1. Rad grade = 14.

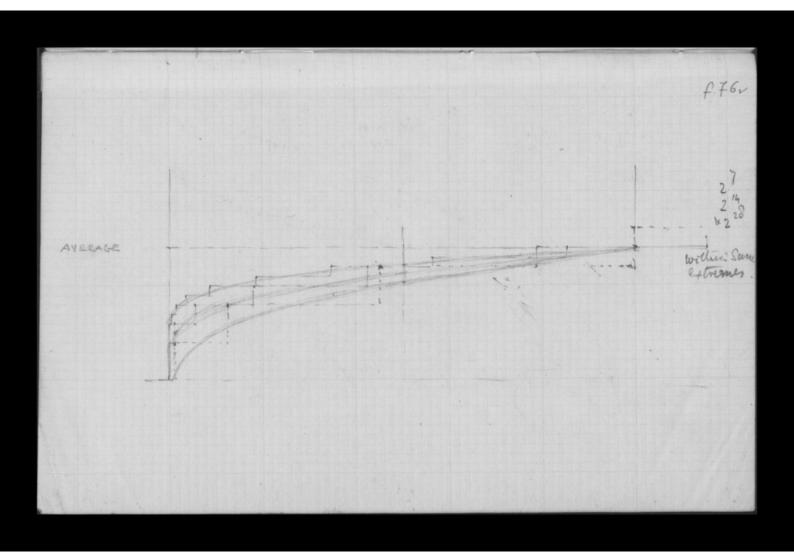


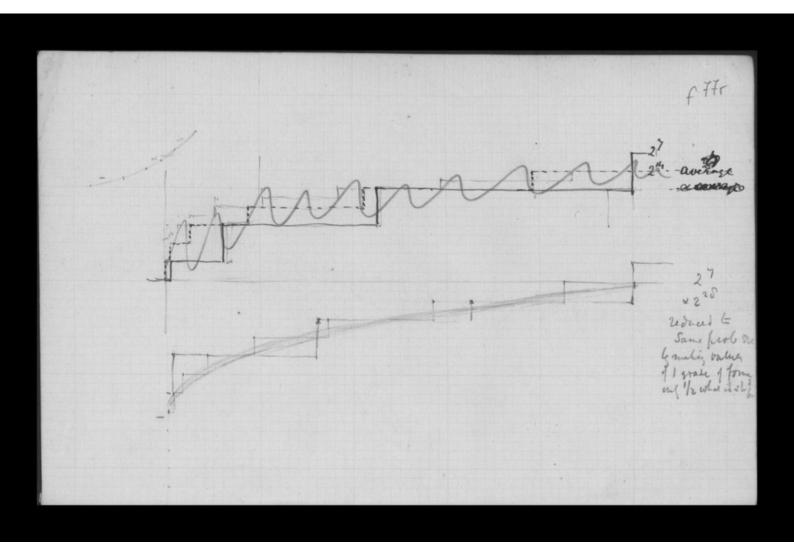












The Snow or Murs Littles meature sems heat f. The Queen Beer made by special food - mentral bees.

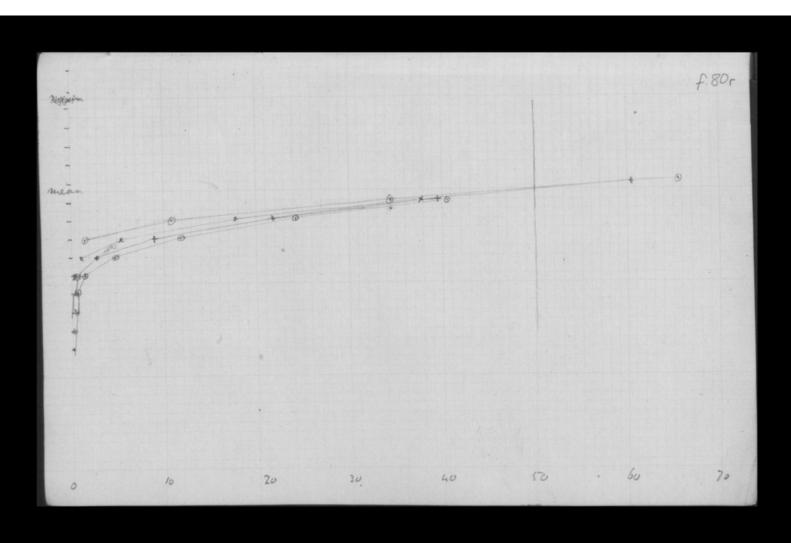
Over in embryo
Government of heavy mechanism by delicate movements
Subancement of therein senses by drags - also of valuent (with lay report)
Observationin in Thibet

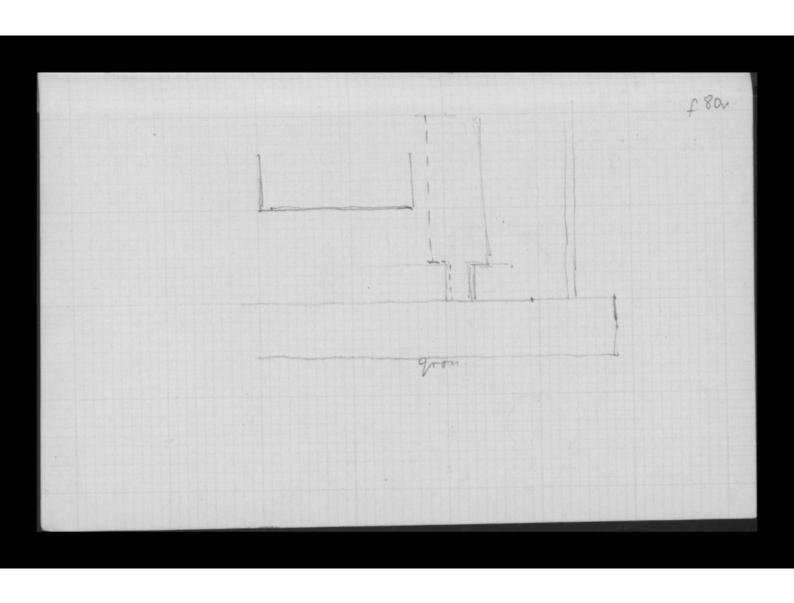
65-254° M = 30 + 70 = 100

Silk a cobwel redisolari. a redform; also transparent sheet

movimment of height of wave by a hand, movimmen a fixed disciplate the affect of restall the being climinated. the effect of rice luf 22/76 (tawley) t t are orin latego Where tenth = rice & fat of tide + extreme height of any wave about beneting level + benett of float. = say 18 + h+ 3 fell = 27 feet. Her valver, at botter flite that offer inwards to to g wold afe x down in a goods this we floats in the like " liteal lite! difference of heirlif there = heirli The balve, leak do there is a gradual read; actual Story from & haper round a ac and d x c, ana, tf. When both rise a fall & tide c descends when one riter of falls in respect to the other, a luney cound & moons the Henry the action on a inferrel differential & the Effect of to tide is climinates of the when fet am the Same height higher them of

I give derived from 2000 peas K 4 M N 0 P 9 Binomial orgives 35 Chayseddo 50 40 24 41 50)





The rank an about 5 /h wil short

More are 31 along trike comprise and a head that

23 along ends

The stimes are 31 6 wite a 1 wid under 7 feet by

31/5 = 162

19/5 = 182

19/5 = 182

Ween f81v Observation. samples brocked at Shelps 1.7 1 MS HAL NES The oquar is french Wulle, L-m belo. KiL abre N+

see last bage town sol of hay as their f.825 I divised & A is "four first" in both laws 0 12 女

meneral by number of produce. data 25-18 21 15 worked 24 (much rever probable) omstowing to them the above. (2) wholly so au cases 15 16 16 (3/8) ? 0 ? Endely follows law of Ever f82v

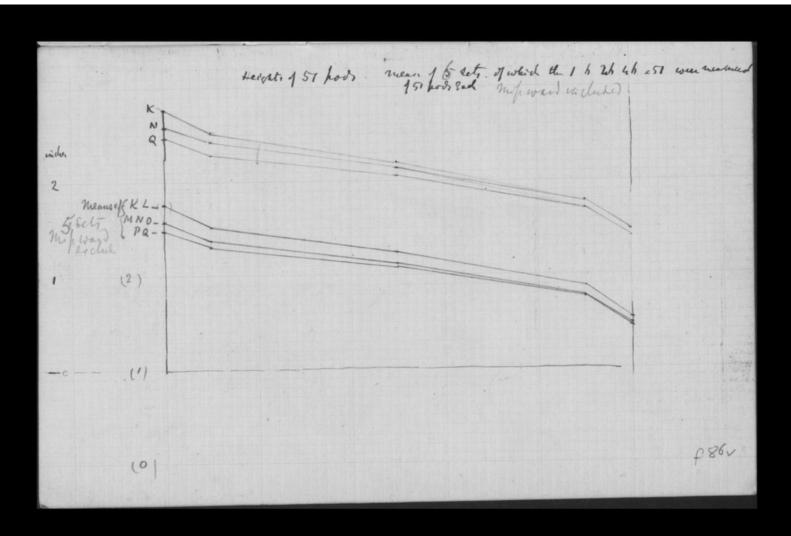
Tertility, revised cale " Searle Darwin (Whitfan)

1/2 15/2 14 Unised 17 arent) Nº 1 rooks Wine 7.8 54 wited produce mumber 1 4006, dearse to revite mumber 1 4006 24 26 27 (her west look)

Except of weight of parent free in crains over \$830 that of its medicine howbace. 3 selected cases K M all cases -026 +0707 Eraphica 49 Mederate under Ble 1186 Corrected -0.54 -0.44 -0.34 -0.21 -0.10 M all cure -0.26 -0.25 -0.35 -0.18 -0.54 - 0.53 -000 graphically. -048 -0.07 0.13 -0.ho ? -002 fostraight -072 -0.60 -0.68 -038 -022 -013 0.00 descest

Distributed of weight in few and of thereathered hear f84v renthy of all the self there have been tabulated

Distribution of weights in produce of differently tiged hear. Ivo hear being taken as a hamble tized hear. nisad cares. The curves are the means of K+L or M+N+U of P+Q Result of Seasle Darwing Whitford, Ward (sifer as there are given) RL MNO PQ --



a.

~

173

0

mor featurers Sweet per grown in 18/5 leagth 51 hods taken at layer -4 KAN M N O P-Q KLMNOPR f.87v

Toth Peternia Sour one in Sach hot measure Selection. A out of lot. Jacoterhere 4 Isterorghi) (ch Varwin Jan 1875) 7834 self fertilised. Peteria self fortilised. Interesofed be westerham croped to 60 5/2 8/2 bariabilit reckonst by the restole feel of turne 61/2 6 Variabile 10 10 30 11 51/2 81/2 20 30 1.88 x

Petunia table 82 trested as a whole. 23 plants Every plant in Every hot. Intercroped Westerhau. 60 Self-fertilised 565/8 50 40/8 40 334/8 30 20 1/8 20 lz(B) in ms Probable Evry on 7/2 \$ 7.0 werleihou 49% 6.6 Interested 5% 3/23 5.4 -51 10.0 1287/8 self fertilite 33% 10 begin with 1. 4th and with the 19th see murks the gian bella nevel

My gun. Sep 21/74

Length of barrels 27 1/2 wil

letter of the state of the stat

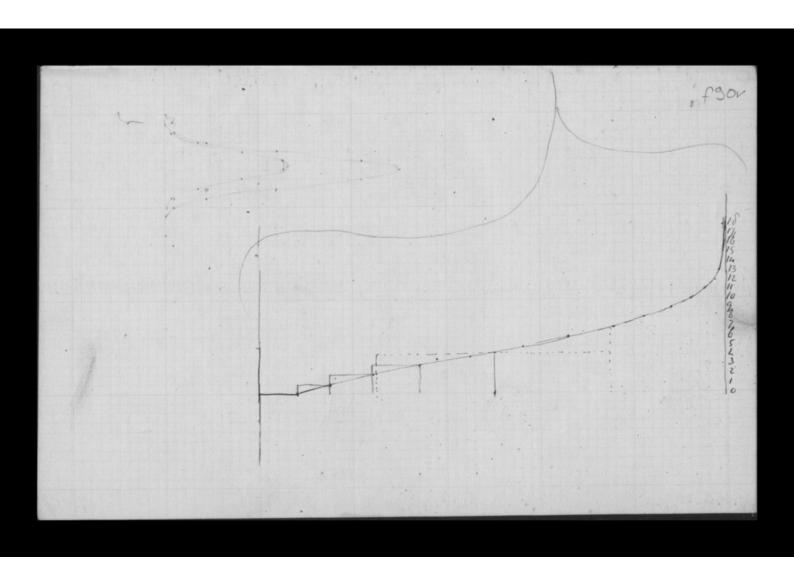
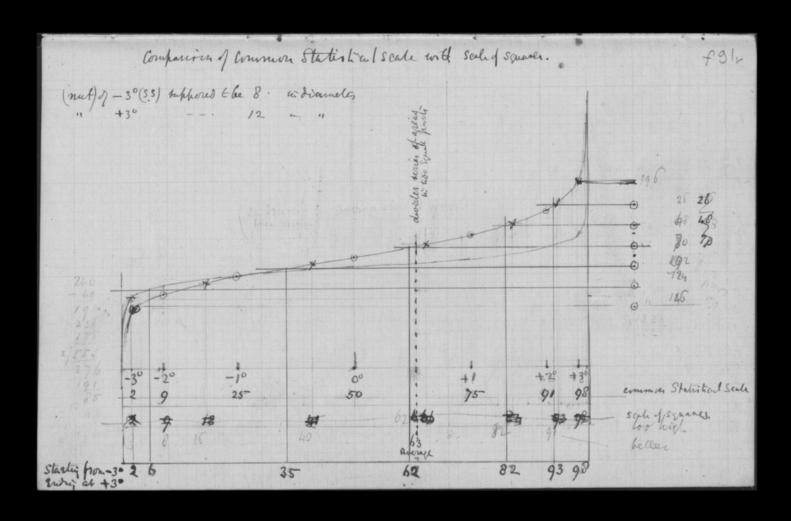
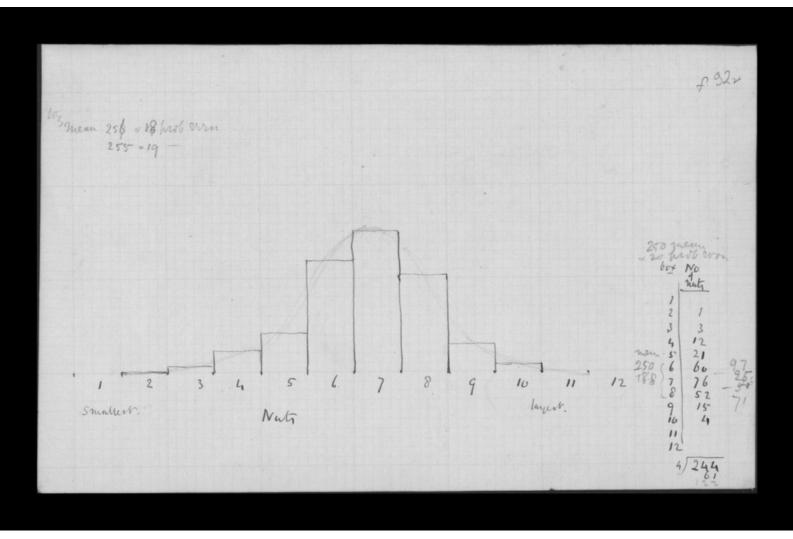
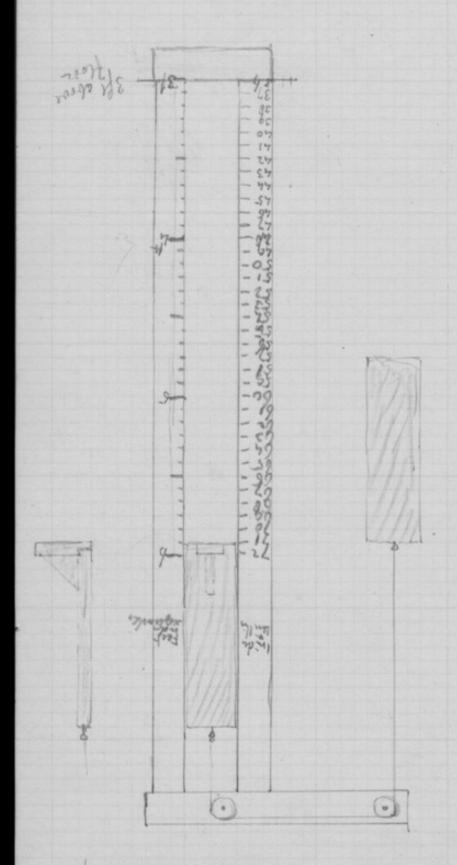


Table she	number of children to a marriage (at	her classes (Hyper-professional south	families à la claper carsell fin:
wach family includy stallown	Backelor mer Shirely during age of weller.	Letto in her	Enough of cares hercents
,	131		65 7
2	183		. 90 9
3	193		106 10
4	185		. 192 11
5	229	.).	112 11
6	194	./	105 10
7	165		87 9
8.	125	1	70 7
9	121	/-	. 54 6.
10	. 86	1/-	40 4
"	63.	/-	30 3
12	46	/-	. 20 2
13	19 /	1	12 1
14	10.	1	, 7
15	7/		4 9
14	4		3 (1
17	3		1 }
f916	Total 1919	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1000 100



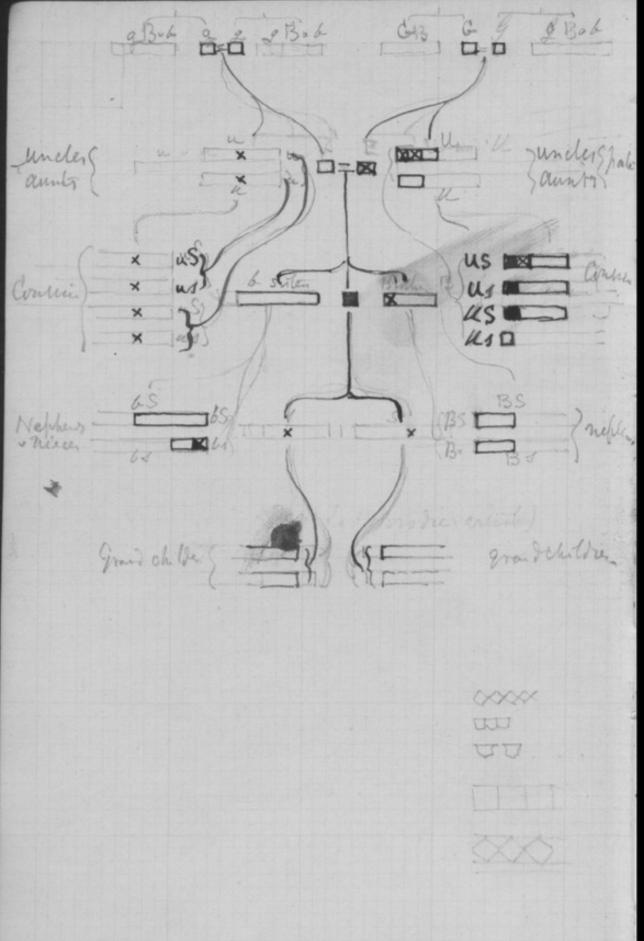


1 they

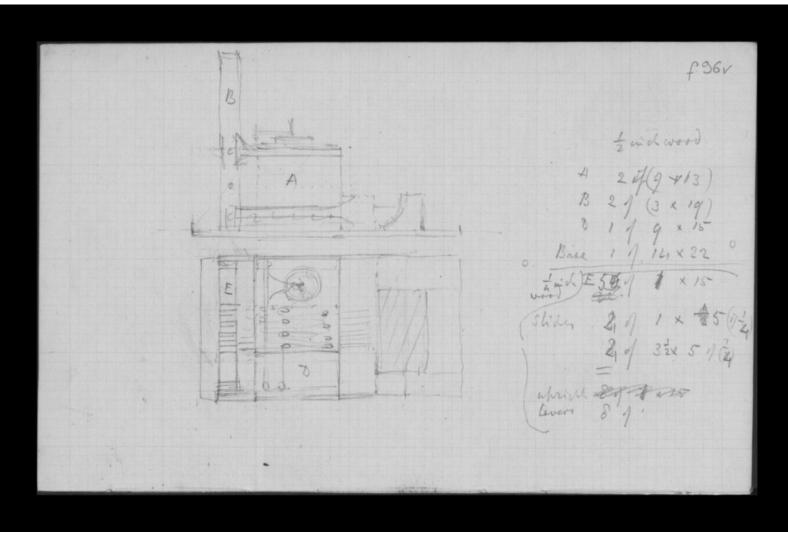


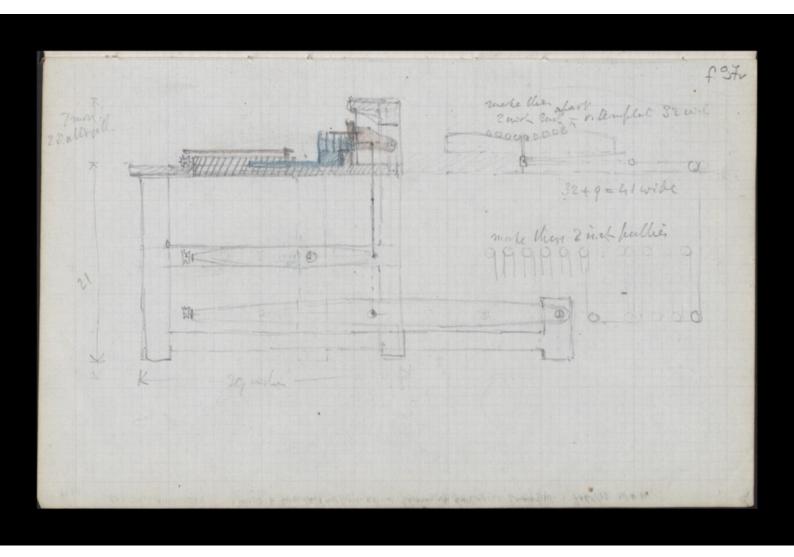
0, 9 has 6

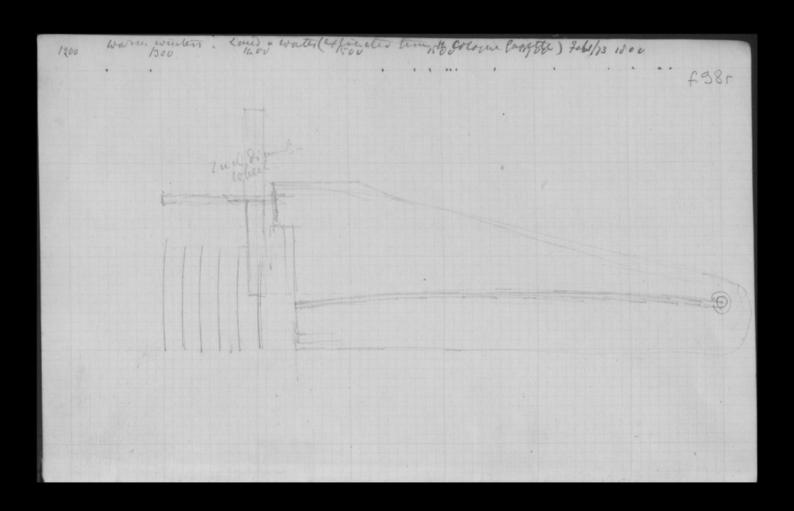
Of 10 Scientific men, belonging to getter families Grandfathery tout of Every 3 familier Uncles. Fathers 144 (12) Brother Self male cousins. 1908 (11) all (12) 100 GB of whom an Erfad (4 they) 5 = 12 45 = 224 1. [WEBE & UEUS] 45 N 185 f. 94v



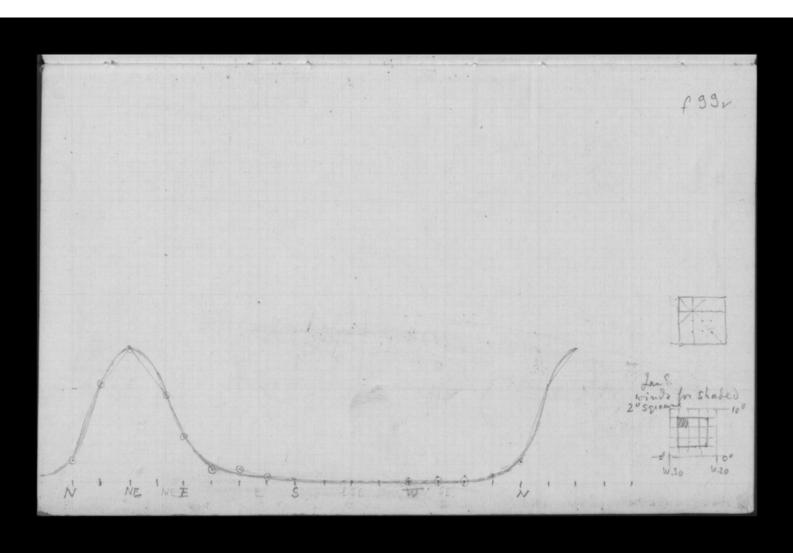
198.t 05 Ks 95



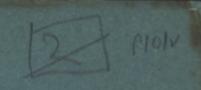




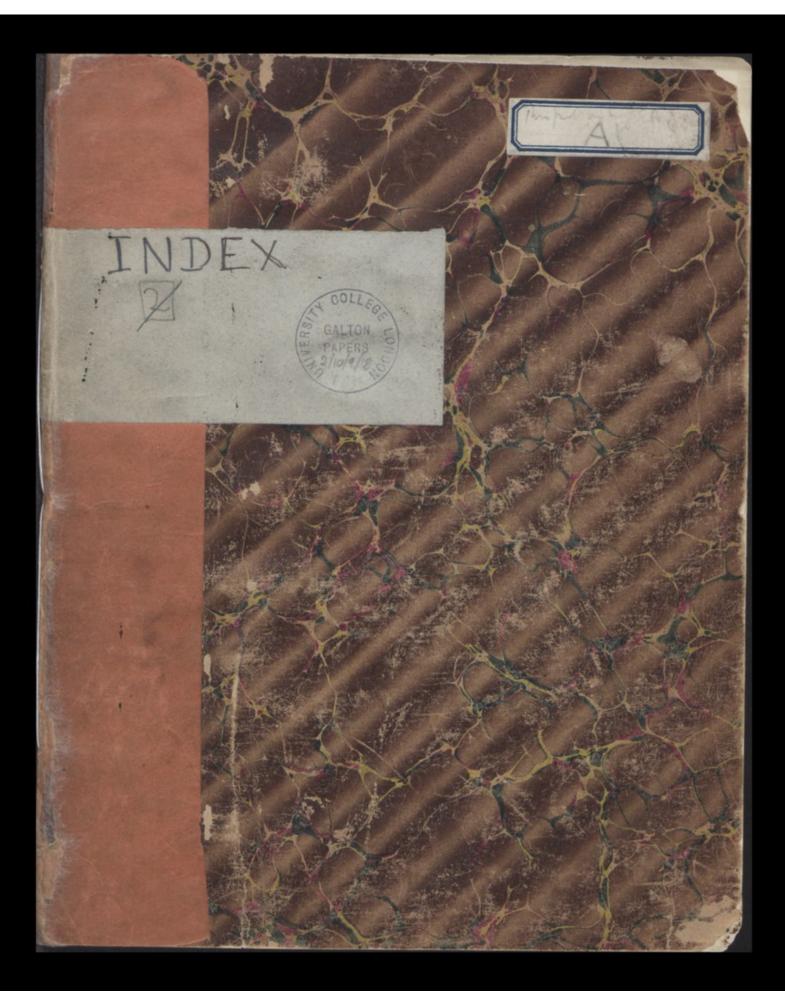
0 Gould p. 3,6



Pouled p. 316 mean dimention f.100r Soldren Salerier 60 Head Theol Show bodie solow tee 2 pages is 50 40 30 20









Contents. Letter losition Shape right Box Composite Camera right Ben. 1.13. Large Camera, Lens, 4 all ac-a XB companiments. Optical Instrument (Cone for be right Box composite) right Bra. P.P. moths (hegatives & Kints). right Box Optical Instrument (unknown) X F. Herbert Spencer, Sociology; Left Brn. P.P. application forms (at my Laboratory) right Ben. P.P. X G. right minerals & Book (Tyrol) Box H Sheets of coloured glass zight Box a a few back x J. Fishing tackle. Gun. Vent. etc x K Box mis Book's addities back 1. left Box Head measurer. Bengal. left M Hereditary Genius. Box left Tarcel. M negister of measurements. Books 0. left

Papers in Cases on Shelves. measurement of moral Sense. measurement of taculties (various) Notes. X 43 Statistical Shading with numbers. Psycho Physics, Various notes a papers lent to Cattell & returned by him. measurable manifestations, memoranda on what might be done & notes. Various: mental & moral. Ussociated Ideas. Note book. Genias & Precocity. Unconscious Cerebration. (montagu Butler). a X169. humerical Discrimination. Tevons. 10. Some as fects of memory, from Theosophist/86.6 12. Idiots. Earlswood asylum. 1880. X : 13. arithmetic by Smelt. 14. Betrayal of feelings by gesture & expression. a Y 15. muscle- heading . Cumberland. Wall mall 1884, a X 16. 117. Thought Reading. see muscle heading (no. 16.). Tolea of a Synopsis or Vade mecum of togic of chance, and calculations applicable to Human Hottems. Thirate for consideration Character, Experiments on . Draft offer of beiges never acted on. Character & Temper. Colour. after images confounding adjacent - Intometer

Papers in Cases on Shelves. Compass rearings expressed by Colour. N. 23 Haydn. Musical imagination. Vitruvius. Pitch note of the Resonant Jars. a 1 25. Taste & Smell, For Tests of. Exceptionally keen eyesight. adele Ethel Galton, mis arthur Butler. X-28. Touch. When rapid vibrations are felt as a continuous. mental effort. Notes on, tatique & effects of, Gichton Browne. Totique. Permanent Effects of mental a work. [Draft of Inquiry]
beigin of Ideas found by Introspection. 1883. b
Thental Associations. Synonyms. Roget X 31. 34. Notes for an address (never given) on the Art of Geographical Description. 35. Geographical References by Council R.G. S., my original proposal which was carried 73. 36. Isochronic Charts, letter from Cole, wanted for K. G.S. Hints to Travellers. Hinders Petrie . Photography in Egypt Stilla (Island of). Account of, Draft for circular (never issued) on Social X.40 position of present householders & that a of their fathers. Social Statikty, Ruling motives.

Papers in Cases on Shelves.



×:42,	Notes on Graham Bell. Heredity in Deaf a
	mutes.
43	Committees of Royal Society. 1896. 4 Catalogue. Royal Society. Longevity.
X 45	Longevity.
46	mortality. (a) manchester - all England -
	Mortality. (a) manchester - All England - 1 Healthy districts - [h) Chance of living one year to longer at various ages.
	longer at various ages.
47	Thomeofatty- Calculations. Groves. Rices of my Anthropometric of becatus.
48	boxatis
9:49.	Spaces traversed by a falling body. a
, 5	Heaction et Instrument.
. 30.	formula.
X: 51.	Spaces traversed by a falling body. Reaction et Instrument. Pendulum calculations. J.D.H. Dickson's a formula. Colour of hair & eyes among members of a Alpine Club. Hights among brothers. Blank forms on be card.
~	Alpine Club.
32.	card.
53.	Hereditary criminals in america; & lawless
	7003
× 54. × 55	What becomes of medical Students (Curve) a
× 57.	
1.57	my experiments.

Papers in Cases on Shelves.



1890	
58.	Chance. a good definition from lon-1
	Chance. A good definition from lon-6.
~	The the state of
0 39.	The worth of classification.
60	Sound diffractions. La Rayleigh.
61	De Erasmus. His optical experiments a
62	Tele-stereoscope by Helmholts. 6
63	Cyclones by "Wheel of Life." 6
Than 64.	De Erasmus. His optical experiments a Tele-stereoscope by Helmhottz. Gelones by "Wheel of Life." Clouds. Captain hobbe's experiments for me with bursting shells 4 artificial Clouds.
	me with bursting shells & artificial
	Clouds.
4 65.	Cyclones & anti-cyclones a
165.a	Cyclones _ aberchomby.
	Telescaphia Cada Sugarested for meather to
4.66.1.	Telegraphic Code - Suggested for weather & Charts - Weather Symbols.
1.00.0.	hatis - weather symbols.
66.c.	Weather column a design
67.	Character of Mithois. Speech by & Israel. a
: 68.	Character of Authors. Speech by D'Israeli. a Spakes peare, quotations from on Democracy & Emin Pasha - miraculous evidence.
69	Emin Pasha - miraculous evidence. 6
70.	anthropol: dinners. answers to invitations. 6
271.	Three-armed Dinner Tables - Mr. hoth a
172	Bulk of gold in the world a
1/20	(undergree (Decimal) weights & measures
/3:	Bulk of gold in the world a Currency (Decimal) - weights & measures a arch: Smith letters.
V 71.	Ordnance maps - my idea's & trials on . a
74	Objects for object lessons.
75	
70	medical Mescriptions _ an account of my a
	influenza.

Papers in Cases on Shelves.

Ola

Rooms of Geog. Soc. - letters from montage a Butter. · 77.a. 1/8. Alkinson. (Siberian Traveller) Charles Anderson_ letters after his re-79.

Featherman - his work of the anthropol: Pantagraph_ a new proposal form. 1868. Sir Charles Wilson _ Printing Ink. Greatest numbers of ancestors.

Verified March 1911

18 %

X . 82

Contents of boxes in right cuploard Etchings - by F. P. Tellows Gav- Innis, photographs of Photo of anthropometric Laboratory Health hibition. Photo of alexander the Great. Phthisis - 2 large Composites. × 3 . Illustrations to lecture on Optical Continuity. maret - Hight of birds. 4 4. Composite Photo _ not by 7.9. Photos for a composite.

Prints of alexander - 4 instructions to 4 a learner in composites photography. analytic Portraiture. × 4. Photo - silhouettes. 4. Holl of portraits for composites. Na pleasa

verified March 1911



Contents of boxes in right cupboard. f8 English men of Science

Acads of scientific men - their circumferences.

Tench translations of Various memoirs by to

The science of the sc Accedents of scientific men - Key to a their names. Kirösi _ a proof plate of his curves to briginal drawings for Human Faculty a Ogive template. Ordnance map of Kent. Scale. 10 Signalling code - Post Office. Times & other articles on R.F.F. · = Vereful March 1911

Contents of boxes in right cuploard. aldershot - hames of officers who attended my lectures. anthropological Institute - Data for address of 187.

Demography - Address - Letters - a Index to minute Book of Philosophical
Chib. 2 V4 -× 5. Indian Givil Service marks. Diagrams for my S. Kensington lectures of Medical students." V 6. Knapsack Guide Switz: first attempts. 17 ms on various books. marks - Physical in Competitive Exams: 6 mosaics - S. Kensington. 10 moths - Old Papers. V/11 6 Newcastle - Proposed becture at. V/2. Numerals, written 1893. 13. a Odolium. - V 14: 6 Ordnance maps - used by Committee. 1892. b Personal equation - Inquiry into b Personal equations - Inquiry into b Pigeons, homing. 15. Inkero16. - 17 - 18 Reaction time -×119. Rede Lecture. OL Road across Hyde Park. 7 121-Sensibility, relative of men & women or -× 122

Contents of boxes in right cuploard XI 23 Sextants - tests of.

- 1 24 Spectacles - diving.

- 1 25 Spirit Rappings.

- xx 26 Stereoscopic maps. a a a - Verified March 1911 Continued

Contents of boxes in right approard XII 1. altazimuth. 2. De Darwin's monument in Lichfield not hur 3.8.9 Cathedrat. a _ https 38.4 Diplomas & Certificates. 4 7.9's letters from africa to Lord Campbell, - nother 5 9 galton _ Redigiee of the family. 6. Darwin - Genealogies. 7. Houses at Damington - humbering. 8. Brehment old lease at Duddeston b-9. Reader - hewspaper. 10. Show D? Norton_ Papers connected with, 11 Stanley - Row at & after Brighton. 12. Telotype. = verified by & March 1911. 11 Taken by MBuller

XIII Hottyaffel's scales on cards.

XIV S' Billing's composite of skulls

XXX Criminals — Outlines of heads — D' Clarke a

XVII Large bookcovers — useful for holding papers. "A

XVIII Blank In S books, not complete but useful."

XVIII Measurement of horses by photography. A

XIX (Inthropology 4 Ethnology — Various old papers — unsorted

XXX South African Journey 1850-3.

XXII Letters + Mementoes before 1850. Sur KKP.

XXIII Letters + Mementoes before 1850. Sur KKP.

XXIII Sasset Hounds.

XXIII Basset Hounds.

XXIII Basset Hounds.

XXIII Growth Stermination of a Median to

XXIII Stature.

XXIII Sheppard's Tables Sent-total Manay a

XXIII Sheppard's Tables Sent-total Manay a

XXIII Sheppard's Tables Sent-total Manay a

+ archibald - Douglas - Weather Types

Baldwin - Determinate Evolution

Pamplet Cases

adler_ Kayer in Soudan. africa - agreement - germany & get Brit a africa - majo. africa _ German map of 7.9.'s travels & africa _ map of Nile della & Suez. atken, John _ Letters etc. colour mixer a ammon Darwinismus. abanderungsspielraum. anderson, Tempest_ Heliograph. 6 anderson, C.J. Lake "hgami. I andrews, LD Boys - Physical characters. anthropometric Instruments. anthropometric (the List of Observations, 6 anthropological Institute _ Publications of , b anthropometric (the Brit: ass: 1879-82 6 B. atkinson - Constancy of malarial fever. B. x Bain - 7.9's statistics of mental imagery Balfour Graham _ address. * Ball, Platt _ heuter insects & Lamarck b * Ball, Platt _ hatural Selection & Lamarck b Ball, John _ Heights measured by Barometers. Bates_ Obituary. , Bateson - Variation in secondary sexual 6 characteristics. > Bateson - Variation in Symmetry. Bateson - Variation in Cocoons. * Bateson - Colour variations of a beetle b Bateson - Progress in the study of varition.

f131

Bentler, madison - The memory Tmage Restiller homenclatures des maladies.

Black - Reduction of a cutain multiple integral.

H Boar telephote sweet structure Tribes

* Bordage - Peux Notes sur les phénomènes d'autotomie K.T.M.

N. Booth. C - Housing in London.

Pamphlet Cases.

Beard _ Beard _ Trance Beard _ Hypnotism. Beard -Legal responsibility in old age . a Beard - Longevity of brain - workers. a Beard - Decline of moral faculties in a Beard - France in lower animals. b. Bettend - Communicability to man of be diseases from animals as food:

Bell; Graham - marriage of the deaf Bentham - Personal History. " Besant, annie .- atheistic Platform. Beyer ... Gowth of U.S. noval cadets . Billings - medical museums. / Binet - Le développement de la mémoire a Visuelle chez les enfants. Bleuter und Lehmann - Lichtempfindungen. Boas - Growth of 1st born children. Boas - On atternating sounds. Bourke - Human ordure etc in religious rites Brewer Disposition of color markings of domestic animals. Brooke, Lady - Photo of a figure Brooks - Study of inheritance. Brown, gardiner - acoustic properties & of human auricle.

Butter - montage - Three sermons of Butter - montage - Specialisation.



Pamphlet Cases

1B & Buccola _ Smell. Bumpus _ Study of variation Burbury -Law of Error Burkill _ Parnassia Palustris L. Burkill - Variations in no: of stamens b Bushe - Three barley coins make one Butter, arthur _ montalembert. Butter, g.g. - Testimonials 1882. Butler, Harcourt - Outh Blicy Calkins - Studies from psychological laboratory Calkins Pseudo-chromesthesia. A de Candolle - Fair & dark & health. Carpenter - mind & Will in Nature Carver - Crystal Palace. Cataloguing - Hints on. Charcot & Binet _ Cale du type visuel Cheysson - Statistique geometrique. Clifford - atoms - Hereditary Genius. Collective Twestigation (thee of Brit: med: Uss. 6 Collins, Howard - Diminution of fow. / x Colman _ Colour - hearing. Contagne et Hounce. - Les impreintes dans les expertises judiciaires. Coville - abouginal uses of plants. 6

£150

Davemport - Quantitative study of Variation
Savenport - Biological Lectures
Savenport - advance of Biology in 1897
Savenport - Variation of the shell of Pecter Lang

v		
. 1	-	Mawfurd - Physical & mental charac-
		Crowfurd - Physical & mental charac- teristics of the African Negro. a Crowshay - Enthanasia.
	1	Crawshay - Enthanasia.
		Crocodile shooting.
		Crombio Learned of the redbract b
		Crackes Frestite time at Starting Engineers In
		Crowbie - Legend of the redbreast. b Crookes - Institution of Electric Engineers b Crookes - Chemical Soc.
		A A Comment of the
V		Crookes - Tsych. Soc. 1897.
	V	Cunningham - Origin of species among a
	D	Daae - Identifizitung von Verbrehein
		Dallinger_ microscopical Soc. ITE.
		Dalmeyer _ Photo: lenses.
V	/	Darwin Chi Streech by Public Orator at Cam: a
	V	Darwin Ch: Speech by Public Prator at Cam: a Darwin, Erasmus _ by Richardson
		Darwin, H anthropometric apparatus a
~		
	V	Darwin, L Photo: lenses at Kew.
		Davenport - Regeneration in Obelia.
		Davenport - Water in Growth.
		Dovemport - latalogue et Ontogony.
		Davenfort & Bullard _ Correlated Variation!
		Davenfort & Cannon - movement of organisms
		by light.
		Davenport + Castle - acclimatization of
	-	organisms to high temperature.
		Dovemport & hear - acclimatization to
		The - the - the the total
		his mais a laterage
		poisonois substances.
		Pavenfort & Perkins - Geotoxis

to	Dixey 7.A - Aybridisation. Doctry of Victorian age.
	Suncker Variation of Rostum in Palaemonetis Duncker Variationsstatistik Suncker Bumpus
ta a	Suncker - Bumpus Suncker - Variation statistics in 2002099. Ellis, Haverbock - The Psychology of Red. Ellis Haverbock - a study of British Genius.
·a·	*X Ewart, Cosser - Note on Telegony. I
*a	Fawcett - The making of a shrine
4	The Tinger prints. The monkey paw prints.

Pamphlet Cases.

	D	De la Rue - Fransit of Venus.	6
		De la Rue - Transit of Venus. Delbeuf - mathematiques et les	trans-
		famisme.	6
	1	Despine _ Hallucination.	a
		Dewey - Suicides in new England	6.6
	V	Dewey - Suicides in New England Donaldson - Laura Bridgman.	a
	1	Donaldson - Temperature-sense.	6
	V	& Donaldson _ Visual cortex.	6 .
		Donders.	6
0	V	La Cane _ Wormwood Scrubs.	0
		Dyck - Katalog.	6
·V	E	Ellis - Ear & Pitch of music.	a
•	V	Ellis - Ear & Pitch of music. Elmira - Reformatory Erle - Tew words for the Trush Erle - Poems	oc
•	V	Erle - Tew words for the Trush	-
	V	Erle - Voems	a
•	1	Erle - management of Gardens Evans - Address at Town to	etc.
		Evans - address at Townto	
		* Fahie - Historie notes on telephone. I	
	F.	Take - Historie notes on telephone.	
		Tank - relegant.	,
		Farrar - Distinction between man 7 as	umab.
		* Tayrer - Defects of vision.	
		Felkin - Diseases of the tropics.	
		* Fitz - Respiratory movements.	
		Fits - Physical education.	
		Tits - Local reaction apparatus.	
	V	Hower - Huxley:	a

f. Itv

galton arthur - Rome + Romanizing etc 1
galton arthur Rotertantism of the Reformed + Catholic Church
of Englance
" " The Catholicity" "

* yamble - applicability of Weber's law to smell .

Hower _ hative races of the Pacific. & V Hower -Hower - Tygmy races of men. a Tochier et Contange - Avortement criminel le · / x torgeot _ Empreintes. Toster _ Collectanea genealogica. Tox Lane - Report on measurement. Frantz - Hockeflen adelsgeschsechter. Frazer - Per Persian temple on the acropolis trager - Tyrtaneum & temple of Vesta. Hazer - Early Italian huts. lustoms etc. trager -Frey Beitrage zur physiologin III. Vx Fröhlich- modificationen des Geruchsinnes. a Fulton - anchory in Scotch waters. Fulton - Fish. no of sex. G. V galton, arthur_ Duke of marlborough. Yalton, arthur _" my grandmother." galton, Sir D. - Cremation. Galton, Sir. D. - Brakes upon railway trains galton, Sir D. - Health. Yalton, J. C. - Epitrochleo - anconeus ! gatton, J.C. - How fishes breathe. Gaskoin - Hereditary tendencies in health Giard - La direction des recherches biobegignes on trance. Giard - Dédoublement des courbes de a gatton

* × Heape - abortion etc in sheep 1

Pamphlet Cases

giard et de kies_ Courbes galtoniennes giard - "Greffe" et la Régénération. goldie - French ambitions in africa. Yoldie - France a England on the Niger. a Gray, D. 7. E. Greene, triese_ Colour. greg - mathus. Grosvenor Club. gruber - Helligkeit der Farben.

× Gruber - L'audition colorée (2 no's) &

Gurney, Edmund - Alphabetical rhymes. a

Gurney, Miss - Dowager Lady Stanley & of adderley. H. + Haddon & Browne _ aran Islands. Hampstead College - Physical training. Harley_ Stanhope Demonstrator. Harrison - Survival of certain racial features b Hartwell - Physiology of exercise. Haviland - Consumption. Haviland - Wolution of Adaptations I & II Haweis - Garibaldi Haycraft - Hole of Sex. Heath - Prophets of Gvennes. Head - Visceral disease Heerwagen - Fraume und Schlaf. Hement - Transmission des caractères etc. & Hement - inseignement des sourds muets. *ax* Tknslow, Rev. Prof: _ Hybrid Rhododendrons. Hudron _ on american anchors

a + Hooker, R. H _ Birtt-rate,

& Horticultural allege at Swanley Report.

Hrdicka anthropological Tovestigations.

7. 1 Henrici - Planimeters. V Henrici _ Harmonic analyses. Henry - Calcutta Henry Bengal Police (several no's). I Hill Tout - Pre-historic man in Brit Columbia Hirschfelder _ momory. Holland _ Heredity. Hofkinson _ Horocks Hough - Fire-making apparatus. Hough - Primitive am armor. Huggins - Photo solar corona without an Huggins - address to, 1885. Huggins -"Kepler" anthropometry Hard -Letter on Home Kule. Huxley - Notes on physiography. Hygiene & Domografity -Inauchi - the calculator J. Jackson _ Handurting & Hygiene Vackson - Tableau de diverses vitesses X1 7acobs - "Prehension" Jopan - anthrop: Soc: Japan - anthrop: Soc:
Jews - Board for relief of poor. L.
Jews - Hospitals & orphans. a

f.20v

V Körön School attendance a Croap- Siphteria 1900 - Victory - Zur internationalen nomenclatur der Todeswasself

*a Lett bridge - guy -

may 3rd 1900 1

· J × Jews - Infant schools. Johnson- Hudimentary Soc: among boys. Tohnson - Physiology of death by electric stock. I Judd Theory of Schillerization. 6-Judd Unmaking of Flints. Judd Lamellar structure in Guarts-6 Judd - Add note to Lamellar structure. Klein _ 36 his among Lepidoptera etc. 1 Kolbe - Vowels. Kurella - Sonderabdruck. Lacassagne Schema du Leveloppement du froduit de la conception. Laponge Théorie plastidulaire - de l'hérédit Droit de Succession. V Latrouge -Lapouge - L'heredite Lapouge anthropologie. Laponge - megalite. La pouge - Selections sociales. Laughton - anemometry Leland - Bureau of education V Leland -Eye - memory Original gypsies. Leland de Leon = Travels of V Liebreich -School life in its influence Robert mayer

* Livi - Pello Sviluppo del Corpo

L'ave Discoveries from the division of a prothates

* maclean - Where we get our best men

L'mayer - Variations of a species of medusa.

* Meek- alexander - Post embryonal History of striped musch by Meek - alexander - Report on trawbing Excursions 1898. I meek - Post-embryonal history of voluntary muscles beek - Post-embryonal history Incisor teeth of house - growth of Farm Ungulates

L "Livi - Curve seriali in anthropometri	a. R
Lloyd - 7.9. on heredity. Lodge - Unusual physical phenomena Lowne - Teratoglogy.	a
Lodge - Unusual physical phenomena	. 6
Lowne Feratology	6
Lowne - Light & sensation.	6
Ludwig - Variationscurven.	6
M* malden - Historic genealogy.	6
madeira - Isle of	1
* mahomed - muscular exertion & circular	tion to
maitre - Le turneles de gavr'inis.	a
* mallery - gesture speech	a
mallery - Customs of courtesy	a
mallery - greeting by gesture	6
marillier - Virgin in Dordogne.	6
markham - Plan for training travellers: Martin - Pithecanthropus	a
martin Bassen lunds det Solmain	4
martin - Rassenkunde der Schweiz.	6
martin, min History + prophecy.	
mason - Throwing sticks	a
mayo, La - Expedition to Ovampo-land.	a
meldsta - Pedigree.	a
meldela - Darwin & modern evolution	e. a
meldola - Address Enton: Soc: 196	a
x merufear - & papers.	
* merriman_ Method of least squares. L	
× millais - Reproduction.	- 1
> minot - Unsymmetrical organization	1





* hational Phys: Lab. __ Reports. hewbolt, Henry _ admirals all

	A.1	2: + ma coming old	^
	Jor	minot _ On growing old.	- 4
		minot - Experimental Bychology.	
		minot - Vererbung und Verjüngung	
		minot - Senescence & rejuvescence.	
		x m' Kendrick - Perception of musical sounds.	
		m' Kendrick - modern cell Theory	
5		mnemonics -	
		monist -	
		x moody, Lowing - Institute of Heredity.	
		mookerjee _ memoir	
		morgan, Lloyd - Origin of variations.	
		x morgan, Lloyd _ Address 1896	
		morris - Darwin's faith.	
		muller, tritz _ Luchtungsveruch.	
,		murray - Roy: Hort: Soc: Journal.	
•		* maybridge - animal bocomotion	. a
-		muybridge - Zoofraxography	a
		× myers - Cosmic history.	
	N	* Newton - acclimatization	
		North, miss - List of collection -	a
		North, miss _ Exhibition of 500 water c	olours a
		X Noyes - Varanoia	
		× Noyes - Composites of iname.	0
	0.	* Noyes - Composites of iname. * Oberlin College - Physical training for wor	men.
		Obersteiner - attention	
		VOgle - Census /85.	a
		Y agle - mortality in medical profession	1. d
		Osborn - Tmagery.	
		ostore - may of.	

101 In paper weren * Rearson, Karl. math: Theory of Evolution mathematical Theory of Evolution Rearson, Karl -Rearson, Karl -Rearson, Karl -Homogamy Critetion Tables of 7(1,v) & A(1-v) tunction Rhythm of the pulse. x Perry- Coste

Pamphlet Cases

	P	> Packard - Theritance of acquired characters.	
		Raget - Rare & new diseases.	
		Paget - Elemental Pathology.	
	*	(Rearson, Karl - math: theory of evolution	
		Rearson, Karl - Reproductive selection.	
		Pearson, Karl - Skew probability curvesa	
*		Rearson, Karl - Savilian Prof:	
		Pearson, Karl _ Spurious correlation.	
		Rease - Voluntary control of heart.	
		Redrono_ audition coloree.	
		> Perry & ayrton - music of colour etc.	
,		Petrie, Hinders - Cyp: to Tyramids etc.	
		Petrie, Hinders - (Upp: to "Pyramids etc." Phillimore - How to write family history a Phillips - In Inem:	
		Phillips _ The mem:	
		× Photography -	
		Y Pierce & Jastrow - Small differences of	
		sensation.	
		Pett Rivers _ act for preserving etc	
,		Playfair - Lost humidian marbles. a	
,			
,		, , ,	
		Porter german trochure	
		*Porter - growth & sex of children.	
		× Poulton_ Heredity	
		x Houlton - Protective colour in insects.	
6		* Poulton - Protective colour in insects. * Paugh - Oral education of deaf & clumb. a Prayer - by Tyndall etc.	
		Prayer - by Tyndall etc.	
		Preice - Watt-	

f.2v

* Reid _ anthropometry Characters, congenital + acquired.

Pamphlet cases

~	P	70	Prestwick-	antiquity of man. a
			Prévost -	School paper
			Puech -	haissances multiples a
×			Puzzle -	Brooke's soap.
ž	R		Ralston -	Russian Operas.
			Ramsay -	anthropometry in Bengal.
×			Rarey -	Taming of horses a
			Ravenstein-	Birthplaces & laws of migration.
			Ravenstein -	Physical education.
			Ravenstein-	
			Ravenstein_	Bathy - hypsographical maps.
			Ravenstein -	Physical education.
			Rawson -	Commercial barometer. a
			Ray -	Languages of Ponape & Hawaii.
			Ray -	Common origin of Oceanic lang.
			Ray -	makura.
			Ray -	aulua grammar.
			Ray -	Oceanic languages.
			Ray -	1 . 4 .
			Ray -	Solomon isle (german)
			Ray -	Texts in Bismark archipelago.
			Rayleigh, Ld-	Optical papers. a
×			Réclus -	lircumcision.
			Reed -	Distances between ports.
			Reich -	Arbeiten
		1	Reich -	Organization + moral character Cards from Japan
		1	Rensselaer_	· Cards from Japan

* * Sandow - Souvenir * Saunders - Discontinuous variation in Biscutella Laurigata.

* a Sheppand - Double Integral.
- Robable values of Frequency-Constants

	R	Revue scientif	ique - m.7.9.
		x Riccardi -	Statura e intelligence.
V		Rimington -	Colour music
		× Rivers _	Psychology & insanity
		× Roberts _	Education & eyesight. a
		* Roberts _	medical climatogy.
		Robertson -	Aborigenes of W.A.
		Robertson -	Testimonial.
×		× Romanes -	Fear of death. a
*		× Romanes -	Conscience in animals. a
K		× Romanes -	Organic evolution.
		× Romanes -	animal intelligence.
-		> Romanes -	Physiological.
		Royal Soc: -	Pamphlets.
·		Ruskin -	gothic architecture.
		Sabine -	memoir.
		Sanderson -	Ludwig.
		Sanitary Insti	tute _ Address of Farquharson. houveau moyen d'observer les
		x Schuyter -	houveau moyen d'observer les
		enfants.	
		Scott -	Harmonic analyses.
		Scott -	15 years fogs.
		Scott -	Variability of temperature.
		» Scripture -	Studies from Yale!
		Y Séglas -	Paranoia.
		2 6	Se si sono Donne di Jenio.
	X	* Sergi - Shirley -	

Sheppard - Use of Auxiliary curves. Sheppard - Tabulation of certain frequency District Sheppard - Statistical rejection of extreme variations

* X Smith, Vet:capt - Pheumonia & Pleurisy in the horse.

on Smith 9. E. - Roadmaking & sport in E. africa.

+ Spottiswoode - Physical apparatus

strickland - Tailor of Froll - Hattan.

"ax Sully - The Laughter of Savages

Pamphlet Cases

	S Shorthand -	
	Shufeldt _	Indian types of beauty.
	Siberia _	meeting of 6:
~	Siberia -	Indian types of beauty. Inecting of 6: Sea route to - a Tables. Health of women students a Exteriments on life.
	Sidgwick -	Tables.
	* Sidgwick , min-	Health of women students a
	Y Simon -	Experiments on life.
	Smith _	Biographical sketch.
	Smith, Bosworth	- Two letters on Uganda.
•	x * Smith, Vet: capt	- Two letters on llganda. - maximum muscular effort a
	of me 100	ise.
	Smith, C.S	Corrections for concentrating a
	neary gus	ns.
	> Smith, Wilberfo	rce - male & female respiration.
•	× Smith, Wilbert	orce- male & female respiration.
	teeth etc	
	Sorly -	Address.
	5-11	
	Jolly -	Size of molecules.
	* Spottiswoode _	Size of molecules. in Nature.
	* Spottiswoode _	Size of molecules. in Nature.
	* Starr -	Size of molecules.
*	* Starr - Steel - Stokes -	Size of molecules. in Nature. Anthropol: work in Europe. Inental science. Immortality of soul.
* .	* Starr - Steel - Stokes -	Size of molecules. in Nature. Anthropol: work in Europe. Inental science. Immortality of soul.
* .	Starr - Steel - Stokes - Strackey - Stumpf -	Size of molecules. in Nature. Anthropol: work in Enrope. Inental science. Immortality of soul. Scientific geography. Schwingunszahlbestimmungen.
* ,.	Starr - Steel - Stokes - Strackey - Stumpf -	Size of molecules. in Nature. Anthropol: work in Enrope. Inental science. Immortality of soul. Scientific geography. Schwingunszahlbestimmungen.
> > > >	Starr - Steel - Stokes - Strackey - Stumpf -	Size of molecules. in Nature. Anthropol: work in Enrope. Inental science. Immortality of soul. Scientific geography. Schwingunszahlbestimmungen.
> > > > > > > > > > > > > > > > > > >	* Starr - Steel - Stokes - Strackey - Stumpf - Success in life * Sutherland	Size of molecules. in Nature. Anthropol: work in Europe. Immortality of soul. Scientific geography. Schwingunszahlbestimmungen. — Guantitative laws of incubation
> > > > > > > > > > > > > > > > > > >	* Starr - Steel - Stokes - Strackey - Stumpf - Success in life * Sutherland * gestation	Size of molecules. in Nature. Anthropol: work in Europe. Immortality of soul. Scientific geography. Schwingunszahlbestimmungen. — Guantitative laws of incubation

× Thomson - Facts of Theritance (2)

Thorpe Prograsof Chemistry from 1800 + 1841 (foundation of the Chem: Soc)
Tollemache - on miss Swanwick

* X Turner, Sidney - Hybrid of dog & Wolf.

T	V	Thomson _	Heredity.
	ly burn	Thomson -	Influence of environment on
		the organ	nism.
	×	Thomson -	Hered: deformity of hand. Composites of skull. Application for examinership. Leipsic school of experimental
		Thomson-	Composites of skull.
		Thomson -	application for examinership.
	X	Titchener _	Leipsic school of experimental
		psycholog	4.
	X	Titchener -	Chronométrie des Erkennung-
		sactes.	
	×	Titchener -	anthropom: 4 psychology.
		Torture, Tost	truments _ a
	X	Tschouriloff -	Dégénération escence physiologique
		des peup	Cell-theory.
		Turner -	Cell-theory.
		Tundall -	Kadiant heat.
	X	Tylor -	Development of institutions
		Tylor -	Development of institutions Winged figures of Assyrian & a nonuments
		other n	ronuments.
U		University Col	lege.
V	1	Venn - à	relation of mental + physical a
	0	Venn - Co	relation of mental + physical a
		10000.	
	x	Venn - Co	am: Anthropom: (3 no's of Nature) étadoque des appareils physiologiques. Extroductive divergence.
		Verdin - Co	tadoque des appareils physiologiques.
	X	Vernon - R	eproductive divergence.

Vires alimentation et Selection

ax Vries doi de disjonation des hybrides.

* Vries - 1900.

* Vries - On Biasthepsis

* Vries - Mon die Abhangigkeit der fasciaten vom alle

* Vries - L'unité clans la variation

* Vries - Sonder - Abdruck

* Vries - Aun tet omkeeren van Halve galton auren

* Vries - Periodicitat der partiellen Variationen.

* Wallace - The problem of utility.

axWheler - grass Tick.

Pamphlet Cases

V	Y Verschaffelt		asymmetrische Variationscurven.
	x Verschaffelt		Graduelle Variabilitat
	y Vivisection	_	
	y Vries	_	Halbe Galton - Curven
	Y Vries	-	
	x Vries	_	Heredity of fasciction. Inethode, Zwangsdrehungen.
	x Vries	_	Zweigipflige variationskurve.
	× Vies	_	Les demi-courbes galtoniennes a
	x Vries	-	
	× Vries	-	Erfelijkheid van Sunfrisen.
W	× Waddington	_	anthropom: ident: of criminals.
	× Wallace	-	Origin of human races.
	* Wallace	_	Organic evolution (I) 4 (II)
	Warner	-	Posture in art.
•	Warner	_	Graphic records of movements a
	y Warner	-	Headaches in children
	Warner	_	Education department
	> harner	_	Brain function in children.
	Walkin	_	Electric chronograph.
	× Watson	-	Facility of error.
-	Watson	_	Testimonials.
	× Watson	-	Extinction of surnames.
	y Weismann	-	Dimorphism of Lepidoptera.
	> Weismann	_	Dimorphism of Lepidoptera. All-sufficiency of nat: sel:
	Welly, Lad	ly -	Sense, meaning, & interpretation.
	× Wey	-	Fraining of criminals.
	× Wheeler	-	Heredity + progress.

* * X Yule -

Theory of Correlation on the Influence of Brias & Personal Squation in Statistics of He-defined qualities

Pamphlet Cases

	W		Whipple -	. 1893	
			Whymper.	_ '	How to use ameroid barometer
			Wilks	_	Pupil in emotional states a
6			Wilks	_	-1 .
6	7	×	Wilks	_	History of my parrot.
			Wilson	_	Brain weight of races.
			Windle	_	Electricity on development.
			Windle	_	Identical malformation in a.
			twin	s.	
		×	Windle	_	Twins.
			Windle	_	Physical characters of teachers. Congenital malformation 4
			Windle	_	Congenital malformation 4
			here	dily	
		7	Windle	6	Domestic dog.
			Windle	-	Teratological literature (I)(II)
			Windle	-	anencephalous foetus
			Windle	-	malformations among fishes.
		,	Wright	-	Domestication of animals in
			mid	dle	ages.
	Y		Yeo	_	gouty constitution.
,			11	60	Worth of life.
	2		Zander		Institute. a

Repetition & Index D

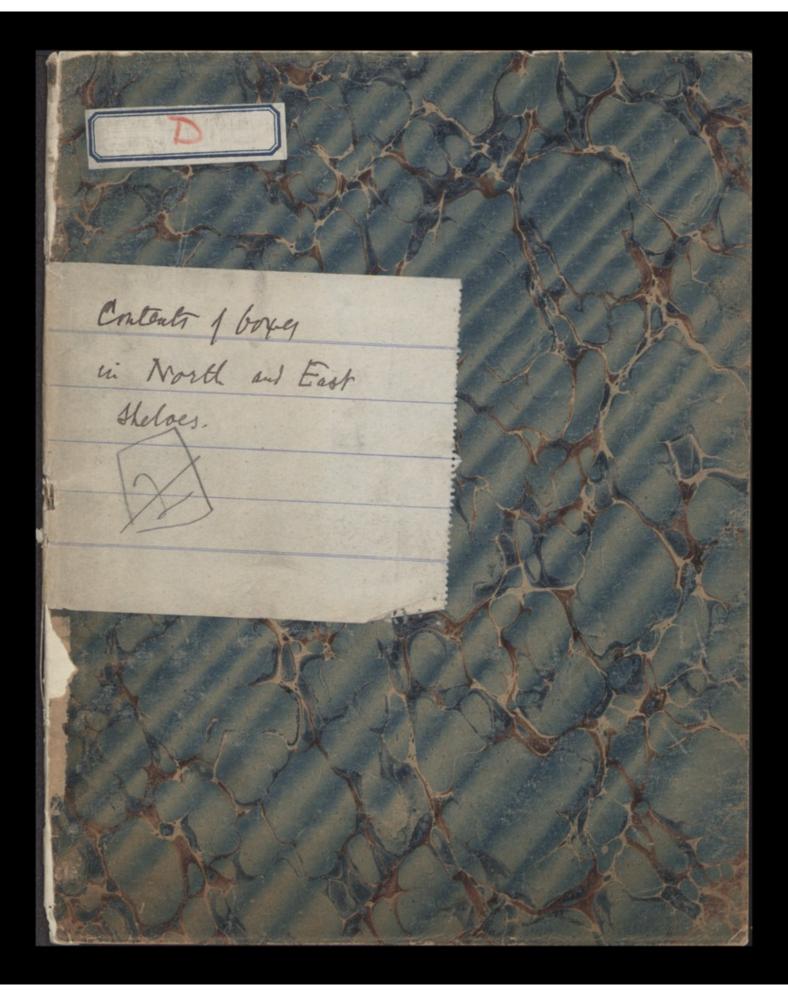
Boxes on shelves

all them are a marke

1		enless otherwise marke)
* X	1.	Small microscopes: mounted lenses. Stereoscopes
	2.	Small microscopes + Beck's wide-angle mounted
		lens, Bakers Cocklington & other lenses.
See 44)	3.	Lenses. long focus mosaic of spectacles to cut up.
-10	4.	Optical. small apparatus. Also Pedometer
	5.	Main glass. Dark glass. mirrors.
	6.	Risms - plain & double - image.
	7.	mirrors for revolving apparatus.
×	8.	Optical spanner.
x		Hyperscope _ the very old one, 4 another.
^	10.	Pentagraph - with microscope.
	11.	Thermometers. Glass tubes.
	12	Sextant stand - Small telescopes, 4 opera glass.
		m? North's aneroid - alt-azimuth-Camera
		lucida.
	13.	glass scales. Limnoscope _ Dark mirror.
	14.	Snap riews for resolving rapid motion.
	15.	Strong scents for experiments.
	16	Spring balances.
	17.	Silks.
	18	Burmese bricks.
	19.	Old models for compasses.
	20.	Fawcett - fossils.
	21.	Whistles.
.)	22	Self-recordingers - Cardiograph Paper for drum.
X		Statistical frickers & counter.
	24	2 parallel rikes for mechanical sorter.

Boxes on shelves

X 25	Cyclostyle.	6-
× 26	33 electros of Finger-frints sent by mach	millan 1
27.	Stereotypes for physical index.	6.
28	Stereotypes for physical index. Woodcuts - typical laws of herechty. lollapsible tubes - Empty.	6
29.	Collapsible tubes - Empty!	6-
30.	medallions D3 Darwin	a
→ 31.	Hehostats - old forms - some good mi	uors.a
× 32.	Sun signals.	6.
33.	mould's for printers, rollers, of other pr	inting
	gear	6
34	Printer roller composition.	6
35.	Folchers.	6
× 36	Dice, - Cubes of wood.	a
× 37	Dice, - Cubes of wood. Law of Error - Reas in glass frames. Abacus - for analysing curves of freque	(sent away)
+38	abacus - for analysing curves of freque	may a
+39	mice.	6
40	apparatus for casting printers, rollers et	t.6
× 41	Human Faculty.	6
42.	Optical Continuity	6
43	Paper Tabes.	6
e 3) 44	Small microscope	9 1
45	mineralogy box	6
X 46	analytical Photographs	a
7. 70		



fla Not Jel 22 1911 There is a roll marked Option Continui



- 1 Glass-plain
 1 Chound-spectacles & some mounted
 Opal
 Dark glass for landscape
- 2 mounted lenves Small hand stereoscopes.
- 3 mirrors glass + lits of metal ones.
- 4 glass- clean
- 5 Solid glass sphere.
- 6 Heliostats Hyperscopes

7 Small meeroscopes

Artificial holizon

Asimuth tompass & S. Africa

Chinometer

Finder of perpendiculars (cross bearings)

Stand of circle. Counterpoise for sextant.

Redometer

Aneroid (M. North's)

9 Stewoscopes

10 glass Tubes. bothing ditto

11 themicals, dry.

Varnishes Paints. Hydrofluovie acid.

- Stencilling Solid oil colours -First metrosological map - Sterlos.
- 14 Pontograph
- Sound + Smell whistles
 - Seales + Weights
 Statistical prickers Counter Cardiograph.
 - 17 apparatus for carting printing roller
 - Curios Rhinocuos Darwin medallion Burmah Bricks Photo prints of enlarged trigger prints by Kearney.

19 Optical Continuity.

20 Birds f. miss horth.

C6 Perit

aneroid (M. Northi) azimuth copylars (S.africa) Balances 16 Birds (from Mil North) 20 18 Burmere bricks Carriograph 16 Chemicals (dry) 11 8 Clinometer 8 Cross bearings (a reflecting arrangement) 18 Curios various Farroin D' Premus (medallins 1) 18 Dire wroten cuber wit 24 varieties of throw

Finzer prints affairtus a mould

17

Glass plain, estored, spal, dark clean 1/4 places Sphere lates dark in case, for reflecting landscape	1 4 5 10 1
Helioslats Horison, artificial Hydro fluoric acid Hyherscopes	6 5 12 6
denses plain and mounted box 1, for testing Eye- little	2 2
Microscopes Smell apparetus used with Mirrors glass and mulas	7 73
Offical Continuity	19

1 1

Paints	12
Pantograph	14
(Perpendiculars & line of Stock (crops bearings)	8
Photos of finger prints, (calarged by Klarney) Printing apparatus moulds to willers. Printing apparatus moulds to willers.	1 18
Printing apparatus hould to willers.	16.
01 1-	10
Rhipoceros horn	18
> Small (britter of souts)	15
Spring balances	16
- Scales and weights	16
Starts for reflecting corcle be	8
Stationery berions	13
Stencil plates & ink	13
Statistical printers	16
Stereoscher	2,9
Stires plate of forst meleon: Times must	13
- /- /- /	
Tests of eye wight box of lenses	2
Thermometers, Stanlard, borting, &	15-150
Thermometers, Stanfart, Orling, or	10
Tuber of glass	10





PROSPECTUS

TREASURY OF HUMAN INHERITANCE

ISSUED BY

THE FRANCIS GALTON LABORATORY FOR NATIONAL EUGENICS

UNIVERSITY OF LONDON

Part I to be issued this year will probably contain among other matters:

Pedigrees illustrating the inheritance of various types of intellectual ability: Francis Galton and members of the Eugenics Laboratory.

Pedigrees illustrating heredity in Diabetes insipidus: By W. Bulloch, M.D.

Pedigrees of tuberculous stocks: By Dr W. C. Rivers.

Pedigrees illustrating inheritance of hand and foot deformity: By Thomas Lewis, M.D., D.Sc.

Pedigrees illustrating abnormality of the eye: By E. Nettleship and

Pedigrees of epilepsy, want of mental balance, and icthyosis will also appear in Parts I or II.

PUBLISHED BY DULAU AND CO., SOHO SQUARE, LONDON

[P. T. O.

TREASURY OF HUMAN INHERITANCE

The Francis Galton Laboratory proposes to issue in parts at short intervals a collection of published and unpublished family pedigrees, illustrating the inheritance in man of mental and physical characters, of disease and of abnormality.

Students of heredity find great difficulty in obtaining easy access to material bearing on human inheritance. The published material is voluminous, scattered over a wide and often very inaccessible journalistic area. The already collected although unpublished material is probably as copious but no central organ for its rapid publication in a standardised form exists at present. The Eugenics Laboratory alone possesses several hundred pedigrees of family characteristics and diseases which it is desirable to make readily accessible. Many medical men possess similar material, and there is a growing desire among genealogists to pay more attention to family characters and supplement the merely nominal pedigrees, current in the past.

For a publication of this kind to be successful at the present time, it should be entirely free from controversial matter. The Treasury of Human Inheritance will therefore contain no reference to theoretical opinions. It will give in a standardised form the pedigree of each stock. This will be accompanied by a few pages of text describing the individual members of the stock, giving references to authorities, and if the material has been published to the locus of original publication. When necessary the characteristic will be illustrated by photography or radiography. In this way, it is hoped in the course of a few years to place a large mass of material in the hands of the student of human heredity. It will not cut him off from, but directly guide him to the original and fuller sources of information. Further the Treasury will provide students of eugenics and of sociology, medical men and others with an organ where their investigations can find ready publication, and where as times goes on a higher and more complete standard of family history than has hitherto been usual can be maintained.

Each pedigree and its description will appear under the name of the author responsible for its completeness and accuracy; and by aid of a key number to a confidential manuscript register of names and localities, it is hoped that it may be occasionally possible for future investigators to recover traces of individual stocks, or to ascertain whether newly discovered cases can be linked onto previously recorded families.

It is proposed to issue the *Treasury of Human Inheritance* in quarto parts at about quarterly intervals. Each part will contain about 6 to 10 plates of pedigrees and such other illustrations as may be needful. For ease of handling and comparison, the pedigree plates will not be bound up with the text. As far as possible each plate will contain pedigrees of a single characteristic or of closely allied characteristics. It will thus be possible to place all the plates containing like characteristics side by side for examination.

An illustrative pedigree plate and a specimen of the manner in which the descriptions will be drawn up accompany this prospectus.

Subscription to each set of four parts 20/-.
Price of each part alone 7/-.

PLATE XI. Fig. 60. Four albinos in a sibship of 11 (IV. 5 to 15). IV. 5 died at three months and IV. 12 at three years, the latter from diphtheria. IV. 11, aged 52 (1905), an educated professional man; hair distinctly tinged with yellow, brows and lashes the same, body hair not quite white; eyes blue, slight red reflex from pupils with difficulty, lateral nystagmus about 70 and not always present; much more rapid when one eye is closed and was worse in childhood; refraction M., V. with his concave glasses \$\frac{1}{\pi}\$; fundus very light even at yellow-spot region, a congenital crescent in each; tall, robust, good abilities, was usually top of his class of 30 at school; his wife dark hair and eyes; their four children medium-coloured hair and two at least have dark choroids. IV. 14, aged 45, albinism of exactly same degree both as to skin, hair and eyes, as 11; refraction M. and V. with his concave glasses \$\frac{1}{\pi}\$; taller than 11 and not so intellectual; wife dark hair and medium eyes; one son (V. 7), aged nine, brown hair, blue eyes, choroid decidedly light; no miscarriages. In regard to both the above, the irides do not now transmit red light, and only a slight redness is visible in the pupils, but their mother says the pupils were red in childhood; "the choroids are more albinotic than the colour of the hair led me to expect" (Mr Usher). Mother attributes the albinism to having, when pregnant, looked at a waiter with moving eyes and white hair; no miscarriages in IV. 5 to 15. The siblings of the albinos (IV. 6, &c.) are dark or medium, none fair; no prevalence of fairness in V. except the two children (V. 8) of IV. 15, who are fair, but their mother is fair. Mother (III. 31), aged 88 (1905), medium eyes, gray hair. Father (III. 5) was fair but not white," lived to 84. III. 19 "was white just like" IV. 14, but had good sight; III. 16, 17 and 18 also very light. II. 8, 9, 10 all had very light or white hair, no information about their sight. II. 19 and 21, very fair, and their mother (I. 5) believed

Fig. 61. Six cases of general albinism scattered in four sibships through three generations, two of them incomplete in degree; consanguinity of parentage of three of the sibships. Very fair and bright red hair respectively in at least two others (III. 4 and IV. 16). VII. 1, aged 7 (1907), very fair hair, bright blue eyes, nystagmus, refraction H. As. 1-5 D. horizontal, V. corrected \$\frac{1}{9}\$; her father (V. 31), light brown hair, gray eyes; mother (VI. 5), golden hair (formerly much lighter), blue-gray eyes. VI. 8, aged 30 (1907), is holding a responsible clerical post; seen when 14 with quick, fine horizontal nystagmus, H. As. 3 D. horizontal, V. corrected \$\frac{1}{2}\$, very fair hair and blue eyes; hair was almost white when a baby. Of his four siblings the second and fourth (VI. 9 and 11) died of diabetes at four and nine years of age respectively, the others living and well; all have (or had) blue eyes, the two who died fairish hair, VI. 10 and 12 dark hair: mother (V. 10), very fair (flaxen hair), one of eleven; all her ten siblings had blue or bluish eyes and several very fair hair; father, no relation, nearly black hair. VI. 15, now (1907) aged 25, seen when six with well-marked albinism and considerable M. As., R. M. 5-5 D. vertical, 1-5 D. horizontal, L. 3 D. vertical, 0-5 D. horizontal, V. corrected about \$\frac{1}{3.6}\$; now well, strong and does everything; albinism much more marked than in VI. 8; her three living siblings have hair from golden red to auburn, and eyes from blue to "olive green." Of the three others VI. 18 is mentally deficient, one of VI. 19 died quite early and two were still-born, their places not known precisely. Mother (V. 44), auburn hair and dark blue eyes, was third of eleven (the eldest (V. 42) was male), all but one were very fair; one sister mentally deficient. Father (V. 19), sandy hair, blue eyes, seventh of eleven (three dark, the rest fair); five living, two died mentally deficient. IV. 19 was an albino, he died a few days after marriage, no further particulars. I

Subscription Form

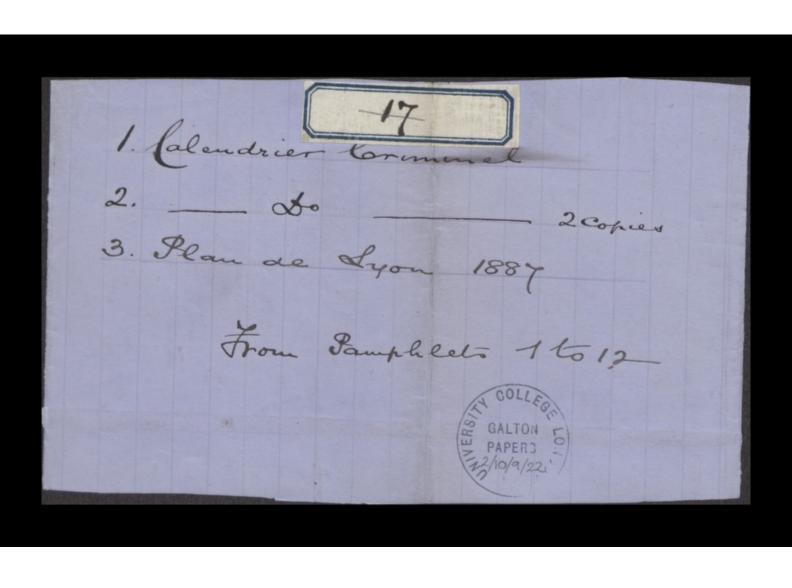
I desire to subscribe to the first four parts of the Treasury of Human Inheritance on their appearance.

Signed:

Full Address:

All communications both with regard to pedigree contributions, and subscriptions should be sent to: The Editors, *Treasury of Human Inheritance*, Eugenies Laboratory, University College, London, W.C.





Faculté de Médecine de Lyon.

Calendrier Giminel

Cours de Médecine Légale. 1881 M. Lacassagae, profeseur.

Répartition Mensuelle Calculée d'après les crimes commis de 1827 à 1870 en réduite pour cette époque à 10000.



Crimes contre les personnes

Chuvier	Ferrier	Mars	Avril	Mai	Duin	Juillet	cloii	Septembre	Octobre	Novembro	Décembre
934	985	1130	930	1103	1297	1234	1124	923	942	932	978
Infunticide	Infanticide	Infanticide	Empoisonne.	Empoisonn."	Viols, enfants	Viole, enfants	Viols, enfunti	Plessures et	Parricider	Assassinati	Empoisonn of
878	861	1015	920	1098	12.67 -	1046	970	908	855	878	884
Parricide	Assassinat	Avortementi	Infanticide	Viole, adultes	Viols, adulter	Viole, adultes	Meurtres	Rébellion	Meurtrer	Blessures, mort	Assassinats
864	822	936	855	1032	1070	1041	964	897	878	853	866
Awtement	Meurtres	Empoisonn.nli	Viols, enfants	Viols, infants	Arvetements	Blemmer a	Viole, adultor	Viols, enfants	Avortementi	Meurtres	Rebellion
847	799	892	816	961	996	980	955	874	861	848	847
Accussinat	Blemwer et comps	Rébellion.	Rébellien	Infanticide	Empoisonn.16	Empoisonn. of	Blessures, mort	Mouther	Blowurer a	Blessures et emps	Blessures a
828	793	862	783	358	975	883	925	863	834	831	837
inpoisonn. M	Empoisonn nti	Parricide	Blessares, coups	Parricider	Parricides	Blessures, mort	Rebellion	Parricides	Blessurer, mort	Parricides	Arortements
798	791	213	763	919	909	864	908	851	\$32	774	533
Blessures eneers accendants	Rebellion	Meurtres	Blessures à des	Avortements	Blesnurer à un arcendant	Avortonens	Blessurer a	Blescures, mort	Assarsinati	Rébellion	Blessures et
789	762	757	759	909	866	132	898	829	816	727	830
de mort	Blessurer, mort	Blessures et reupe	Bleaurer, mort	Blessurer et coups	Rébellion	Meurtra	Blemurer et ampr	Amarrinati-	Rébellion	Avortementi	Parricider
765	745	786	751	900	852	82G	867	805	816	721	801
Rébellion.	Blessares misen	Pleasurer, mort	Meurtres	Blemurer et	Blessurer et	Blessures et	Assarrinals	Blessures à	Blemwer et	Blessurer a	Meustres
159	704	782	739	885	8.64	793	846	793	729	697	789
Meurtres	Parricider	Accarcinati	Viols, adulter	Blessures à des accordants	Meurtres-	Accarrinati	Parricides-	Viols, adulter	Viole, enfants	Infanticides	Blessures et
751	683	781	704	826	\$43	774	755	768	698	625	782
Messurer et engrynwer	Viole, adulter	Viols, adulter	Acrarcinats	Aceaerinali	Acrascinals	Rébellion	Avartement	Awrtement	Empaironn.#6	Viole, adulter	Infanticides
109	617	727	686	807	814	735	723	692	690	578	649
Piels s.adulta	Arortements	Blessures env.	Arcytements	Rébellion	Blessurer mort	Parricides*	Infanticides	Infanticides	Infanticides	Empsiconn."	Viole , adaller
559	526	688	576	796	772	708	555	680	646	497	502
iols s cufants	Viels s. enfants	Viole s, enfants	Parricider	Meartrer	Infantroides	Infanticides	Empsisons."	Empoisonn's	Viols, adulter	Viole, enfante	Viole, enfant

Crimes contre les propriétés-

Janvier	Tovior	Mars	Aveil	Mai	Duin	Juiller	Aoû-	Septembre	Octobre	Nonzembre	Décembre
1518 Vols	976. Faure	926 Incondies	1061 , Faurse montaine	824 Vole sans	808 Vols par- un donnettque	1123. Incomdies	1434 Incendier	1057. Incombies	944. Vols	1036 Vols- dans les églises	1084, Vols
1201	393	874	898	793	780	850	952	909	906	1060	1024
Taure monnaie	Note arec violence	llok ance violence	Vole dans les	Volr qualifiér	Incendier design babiler	Vols sans	Incendier ed habiter	Incendier de babiter	Vols par un domestique	Volr sant	Volr qualifies
1148	860	349	819	791	769	778	854	860	836	995	1022
	Faucre mennaie		Incendier .	Incomdies d'ed habiter	Yole qualifiés	Fairs en écritare privée	Vols sans-	Vols par un domertique	Vols qualifiés	Vols, violences	Vols sans
1027	847	541	797	790	697	771	837	792	835	925	994
Faus en écriture	Vols qualifiés		Incendier did non hab.	Vols avec	Faucre monnaie	Vols qualifiés	Faucre monnaie	Vols same	Vole sans	Vols qualifiés	Faux
949	838	812	776	785	697	761	800	762	308	872	986
Vols qualifie's	Vols sans	Faux	Faux	Volt per un domestique	Vols, violences	Vols par un domettique	Vols par un domettique	Fane	Volr dans	Faux	Vols parun domestique
944	831	790	764	785	687	740	737	741	802	854	965
Yols par un domestique		2.5	Vols par un domestique.	Faux	Vols cans	Incendier	Fane	Vols qualifie's	Incendier	Vols par un domestique	Vols, églises
880	803	785	755 -	751	676	732	749	720	762	810	945
Vols sans	Incondier	Vols sans	Vols qualifier	Tausse monnaie	Fauc	Vols, églises	Vols qualific's	Faunc monnaie	Incondies ed.	Incendier ed hebiter	Eurse monnaie
836	771	761	674	692	599	648	665	679	755	808	832
Incendies difhabites	Vols par-	Vols par un	Vols, violences			Vols, violence	Vols, églises	Vols, violences	Fanc	Incendies ed non habites	Incendies and habites
626	719	742	633	599	540	612	576	607	736	790	793
Invendies ed non habile	Incendier.	Incendies di non babites	Vols sans	Incendies ed.non habites	Incendica ed.nen basiles	fausse mouncie	Yols, violences	Vols, églises	Fausse monnsie	Iausse monnaie	Incendies vit non habiter

(Faculté de médecine de Lyon, Roft A. Lacassagne Como de médecine légale).



Répartition Menouelle ramenée à 10,000 Crimes, annuels Calculée our les Tonnées statistiques De 1827 à 1870

Crimes contre les personnes

F		- 1	- :	- 1		- 1	1	1	1		1	
eRebelliono -	765	791	892	816	807	866	774	925	908	816	774	866
Blesoures our	793	745	727	763	885	909	1041	903	805	861	721	847
Bles. graves			787	783	909	852	826	898	923	816	843	833
Bles. mortes	751	799	101	100	303						470	789
Meurtres	789	762	786	769	900	814-	889	955	851	834	878	
	759	822	813	751	796	844	832	970	874	855	655	801
Empoisont	823	793	936	930	1103	996	930	555	680	698	578	978
Assassinats	847	861	782	704	826	843	793	867	829	832	932	884
Tarricides	878	704	862	576	958	975	735	84.6	863	94.2	851	850
Trols senfants	559	526	688	855	1032	1297	1234	1124	897	729	497	502
Violo of Arult	709	685	781	739	1098	1267	1046	954	793	646	625	649
Infanticides	93.4-	985	1150	926	961	772	708	723	692	690	697	782
Avortement	864	617	1015	686	919	1070	864	755	768	878	727	857
	Janvier	Ferrier	Maro	avril	Mai	Juin	-	_	Septembre	Octobre	Novembre	Decembre
Estal de la Criminalité (Eshelle spéciale	9471	9088	10199	9288	11194	11505	10666	10485	9883	9599	8956	9538

(Faculté de médecine de Lyon, Brof! A. Lacavoagne, Como de médecine légale).

Repartition Mcnouelle ramenèr à 10,000 Crimes annuel Calculie our les Données statistiques De 1827 à 1870

Crimer contre les propriétées.

		-	-	1	1	1	-					
Vols our chemin publi avec violence	1148	893	874	674	790	697	648	576	679	944	995	1084
Volo qualifi	949	847	841	755	793	769	771	749	741	836	925	1024
lolo sano viele	880	338	785	633	824	687	850	854	792	835	1060	1,22
blo par	944	771	761	764	785	508	761	300	860			
Velo the ightee	1318									906	854	986
Farre	1018	831	\$49	898	692	599	732	555	607	808	1086	965
r dorit priv.	1027	976	312	778	785	676	778	787	7692	785	872	994
Fansse	1201	860	790	1061	7.51	697	612	837	790	736	790	945
Jucond. Fif habites	336	803	926	819	791	780	740	962	909	802	810	839
Incond. wu hab.	69.6	719	742	797	599	540	#23	1434	1057	762	808	
	Janvior	Soveier	Macó	avril	Mai	Juin	-	-	Septembre	-		798 Décomb
otal de la												
ivelle speciale	8929	7538	7380	2477	6810	6253	7015	7654	7127	7384	8150	8645



(Faculté de médecine de Lyon, Rof! A. Lacassagne, Como de médecine légale).

Repartition Menouelle ramenée à 10,000 Crimes annuela Calculie our les Données statistiques de 1827 à 1870

Crimer contre les propriétées.

				-	-							
Vols our chomin publi avec violence	1148	893	874	674	790	697	648	576	679	944	995	1084
Volo qualifi	949	847	841	755	793	769	771	749	741	836	925	1024
Volo sanoviele											1	100000
	880	388	785	633	\$24	687	850	854	792	836	1060	1022
Volo par someotique	944	771	761	764	785	808	761	300	860	905	954	986
de les églises	1318	831	549	898	692	599	73%	666	607	308	1086	965
Fance on scrit priv.	1027	976	312	776	785	676	778	787	762	783	872	994
Fansse	1201	860	790	1061	251	697	612	887	790	786	790	945
Incond. edif.habitio	886	803	926	819	791	780	740	96%	909	802	810	838
Incom.	626	719	742	797	599	540	1123	1434	1057	762	808	798
	Janvier	Fiveier	Mars	avril	Mai	Juin	Tuillet	Donz	Septembre	Octobre	Hovembre	
Cotaldela Criminalité												
(Echelle speciale)	8929	7538	7380	7177	6810	6253	7015	7654	7127	7384	8150	8645

(Faculté de médecine de Lyon, Rof! A. Lacavoagne, Como de médecine légale).

Répartition Menouelle ramenée à 10,000 Crimes, annuel Calculée our les Tonnées statistiques De 1827 à 1870

Crimes contre les personnes

-			-	-			1	- 1	-	- 1	- 1	
Rebellions	765	791	892	816	807	866	774	925	908	816	774	866
Blesoures our									for.	861	721	847
aocendanto	793	745	727	763	885	909	1041	903	805	301	1-1	047
Bles. graves	751	799	787	783	909	852	826	898	923	816	843	833
Bles. morte	789	76.2	786	759	900	814-	885	955	851	834	878	789
Meurtres	759	822	813	751	796	844	832	970	874	855	855	801
Empoison	823	793	936	930	1103	996	930	555	680	698	578	978
Awawinato	847	861	782	704-	826	843	793	867	829	832	932	884
Tarricides	878	704	862	576	958	975	735	84.6	865	942	851	830
Wols senfants	539	526	688	855	1032	1297	1234	1124	897	729	497	502
Trolo of Dulk	709	685	781	739	1098	1267	1046	954	793	646	625	649
	-	000										
Infanticides	93.4	985	1150	926	961	772	708	723	692	690	697	782
Avortement	864	617	1015	686	919	1070	864	755	768	878	727	857
	Janvier	Ferrier	Mars	avril	Mai	Juin	Juillet	Clour	Septembre	Octobre	Novembre	Dicemb
Estal de la Criminalité			14									
(Echelle spinale		The state of the s	10199	9288	11194	11505	10666	10485	9883	9599	8956	9538





Try Sylvester



ROSALIND, AND OTHER POEMS.

SUPPLEMENT TO THE LAWS OF VERSE.

J. J. S.

FLIEGENDE BLÄTTER.

SUPPLEMENT TO THE LAWS OF VERSE.

Dedicated to

FREDERICK LOCKER, ESQ.,

LAUREATE OF THE LIGHTER MUSE,

IN TOKEN OF APPRECIATION AND REGARD.

PRINTED, NOT PUBLISHED, Second Impression,



PRIVATE.

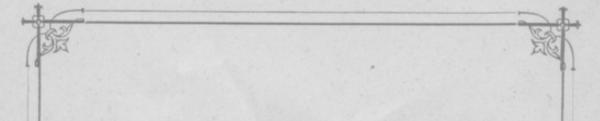
FOR THE EXCLUSIVE USE OF THE DONEE.

By J. J. SYLVESTER, F.R.S.

CORRESPONDING MEMBER OF THE INSTITUTE OF FRANCE; PROFESSOR OF MATHEMATICS AT THE JOHNS HOPKINS UNIVERSITY, BALTIMORE.

LONDON:
GRANT & CO., TURNMILL STREET.
1876.

LONDON GRANT AND CO., PRINTERS, 72-78, TURNMILL STREET, E.C.



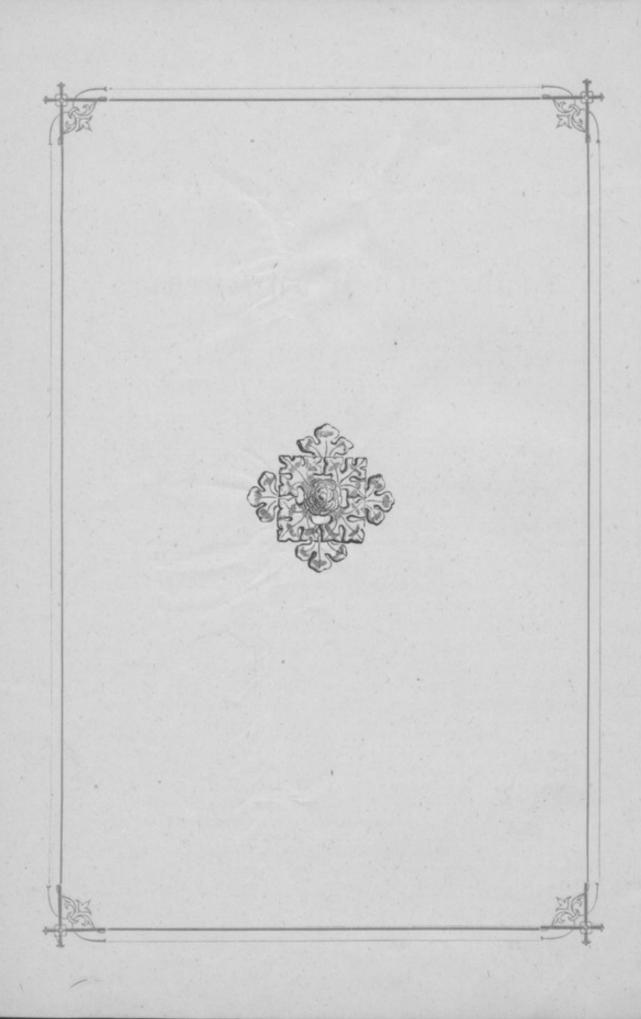
The author has collected together a few pieces not included in his "Laws of Verse" which he considers may be not altogether unworthy of preservation, and submits them in conjunction with his newly composed "Studies in Monochrome" to the lenient judgment of his friends, as his Swan-Song on the eve of his departure from his native shores.

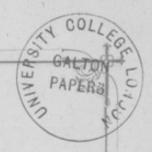
Athenæum Club, April 3, 1876.

The Author's address after the end of this month will be Johns Hopkins University, Baltimore, U.S.; until then, Athenæum Club.









Studies in Monochrome.

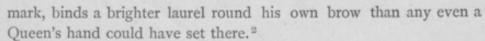
BY A PROFESSOR OF ADVANCED MATHEMATICS.*

No. I. ROSALIND.

LADY ("a born actress" distinguished for her successful impersonation of Shakespeare's "Rosalind") was supposed by the author of the annexed lines, with or without reason, to have sat in part for the portrait of Cecilia (can one live near the rose without imbibing some of its fragrance?), as delineated in a tale written several years ago and destined to be read with delight for many years to come. The annexed rhyming epistle addressed to her in her character of Rosalind is to be understood as the out-come of a "wit-combat," into which its author, Marsyas-like, had the temerity to enter with a veritable Apollo in wit and song, the author of Cecilia's being and of a poem which another great poet, our Muses' Pride, is stated to have said "he would rather have written than all his own poems put together," a generous avowal which, although considerably over-shooting the

^{*} The incongruity between advanced mathematics and verse composition is more apparent than real—Mathematic commencing as a practical art, thence passing into the form of a science, having again emerged into an art of a higher order—a fine art—plastic in the hands of the Mathematician, obedient to and taking shape from his will, and almost admitting of the free play of fancy upon it, thanks to the deeper principles evolved in the new Geometry, the higher Algebra, and the calculus of the Continuous Riemonn. This higher art is again passing into science embodied in the sublimer theories of Physics and Elasticity, and so may we anticipate a continual round of palingenesis, or series of Evolutions, in an ever more and more refined and ethereal medium of operation.





In constructing some of his verses the writer has had the opportunity of drawing as it were from the life, or if he may so say, performing the process of vivisection with the consent of the patient, an intimate and gushing friend of his, who has unreservedly expressed to him the sensations experienced by him under different circumstances of his existence, which the author has thus had an opportunity of transferring at once from the living subject to his canvas instead of having to seek for information second-hand in the works of the poets.

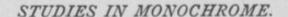
The rhymes, which might be indefinitely extended, have been deduced by a somewhat indirect and circuitous process from a new form of Hypersyzygetic Canonico-meio-catalecticizant, varied and enlivened by an occasional use of a few carefully selected Pippians and Quippians, borrowed from the inexhaustible laboratory of his esteemed friend, Professor Cayley.

The whole of the poem, with the exception of the line at the beginning and the two at the end, forms one single sentence, and is believed to be as long as any the genius of the most obscure of our Teutonic kinsmen has ever succeeded in puzzling out from the recesses of his inner consciousness. To follow the Anaconda-like sinuosities of this portentous period, the following key, consisting of lines selected from the poem, will be found useful:—

In Cecilia's name I find
(Deem not thou the guess unkind)
Celia with a sigh combined,
Whose five letters loose align'd
Gems new set and recombined,
Fairest O! of lily-kind
Shall disclose to every wind
With each mortal thing untwinned,
Thy sweet name, dear Rosalind!

Not Mr. Furnivall or any one else will ever persuade me that Shakespeare intended *Ind* to be pronounced as *īnd*, or *lin'd* (abbreviated from *limned*) as *līnd* (!); and I consult only the exigencies of





my own ear in the alternations and successions of the two sounds total and total employ in the ensuing lines. In one instance I introduce the open sound in a line unbalanced by its repetition in any of the adjoining ones, intending thereby to produce a particular effect, as of the concentrated fire of a diamond or of light shining upon a dark ground. Long before that line is reached either sound has made so permanent an impression on the ear that the internal auditorium of itself supplies a latent rhyme or chime to total or total whenever needed, just as it only too readily suggests to the ear concealed fifths and octaves in musical composition.

TO ROSALIND.

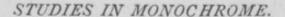
The lines enclosed within brackets [] are recommended to be omitted on the first reading or recitation of the poem. They are inserted as contributing to it literary completeness, but although unobjectionable taken per se, tend somewhat to check the wished-for impetuous flow of the verse, especially in the invocation part, commencing "Fairest O!" which may be regarded as the Heart of the poem, as the Cecilia notion is its Primum Mobile. The words included within parentheses from line 18 to line 40, from line 76 to line 79, and from line 105 to line 109 are interjectional asides, supposed to be addressed to himself by the author.

Friendship's not like love purblind—
Spelled with sympathetic mind,
In Cecilia's name, I find
Pencilled in with art refined,
(Richest ore is deepest mined)—

Deem not thou the guess unkind,
Bred in fancy unconfined
That doth love to loose and bind,
Or a spirit unresigned
That to jaundiced mood inclined,
Hath 'gainst one with spite repined,
Whose bright wit's o'er wide world dinned,
Quick-lit like match paraffin'd,
Yet like Marsyas stript and skinned,³
Critic-punctured, harshly lin'd,
Each chance slurred note solemn hyn'd;⁴

5





Daisy crushed by furrowing tynd.5

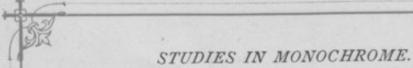
(Wit ne'er flourished that ne'er sinned, Weeping sages that ne'er grinned, Kettle that ne'er came untinned, 20 Top ne'er fallen that e'er spinned, Wine ne'er spoiled though safest binned, Meats hermetically tinned, Hatchway aye untarpaulined, Quenchless fired rope turpentined, 25 Mine that ne'er was countermined, Anchoret all life long undined Hound so staunch that never whined, Noun that's wholly undeclined, Music score sans holding bind,6 30 Saint too pure to be maligned, Spite of heart and brain calcined, "Erring brother" still opined! So had'st thou, heroic Brind !7 (Eye! cheat ear! with ind for ind) 35 Heart of oak, Herculean-spined, Whom when rein Revolt resigned And Clyde's blows were bulletin'd, Thrice tried Hymen failed to bind Once to celibacy a mind)8 40 Be not my presumption fined That would peer athwart the blind: Is not well the clue divined, Or the hap was't undesigned In the words thus underlined 45 (Precious ore in knotty rind), Celia with a sigh combined?9 Whose five letters loose align'd, Gems in fashion new assigned Magic set and re-entwined, 50

Amethyst, lazuli, jacinth see! Chrysoprase, emerald's effigie. Myrtle, almond's peach-hue fine 10 Roses, ivie, eglantine, Odours breathed on jewel-shine! 55 Fairest, O! of lily-kind,11 Perfect pearl and priceless find! Pure as poet's milk-white hind, 12 Spirit! from all dross refined, 60 Hearts to ravish Heav'n-designed; Fresh as rills that sparkling wind On their way the sea to find, [O'er smooth pebble-bed patined.]13 Dew-drop! on which sun hath shined,14 Shedding glamour undefined, 65 And a light that doth remind Of the cloudless heav'n behind. Whose light laugh, like bells sweet-chimed, 15 Or hushed trill of bow refined Touched with fingers taper-tined, 70 Piercing feeling's inmost rind, Tone-spray tossing on the wind16 Leaves no smart unmedecined. 17 With fond folly all untined, To each duteous law resigned; (Round her finger she can wind All to obey her disinclined: Who so wilful or so blind To say nay to Rosalind!); * 18 Perfect lady! kith and kind-80 Soul of bounty unconfined, Courtesie by long-standing fined, 10 Inborn tact unindoctrined.

^{*} Aliter-To gainsay coax Rosalind.



Nymph! nor starched nor superfined; Miranda, Portia, Beatrice joined ²⁰ Who wit combat ne'er declined, To whom every heart pays teind ²¹	85	
With faint blush incarnadined, O'er cheek stainless nectarined; ² Not pearl-powdered or carmined,	90	
Tinged with rose or anilined; Svelte as Rachel em-buskín'd Or swarm gathering pet Gleminde, 2 3 With fond ditties penny-a-lined		
Oft proposing, oft declined] Redolent of youth undwined ²⁴	95	
Tasso's op'n-as-day Clorinde! Saucy-sweet and cruel-kind, Like mixed taste of tamarind.		
Form! in Memory's depths enshrined, With gay Ball of Fancy twined, Stooping Venus! Circe-eyne'd, ²⁵ Whose hue shuns to be defined	100	
True blue, or grey mazarined,		
Sympathetic orbs, (hush! mind! Words displease her of that kind, Prune such phrases or exscind— Maidenhood unindovined, 26	105	
Fancy-free fares Rosalind.) ^{2 7} Poising slipper satin-lined, Clasps great-grand-maternal bind; ^{2 8}	110	
That dropp'd slipper left behind, For whose loss Cinderella pined, Till her tears were anodyned,		
(Salt, not soured nor alkalined); By angelic hands designed, Shape and feature, voice and mind,	115	
ompo and remark, roles and mind,		



And with stamp of Nature signed, [Sealed, "writ-large" and countersigned,]29 Sum of worth in woman-kind!

120

Whose dear praises I could grind, To this faithful heart consigned, In each alley, nook, and wynd, Or shop deux ex-premières mind, 30 Morning, noon, and having dined, Or with "friends in council" wined, And on dreamy couch reclined-

Let me of my words remind! "Five loved letters loose align'd, Magic-set and re-entwined," Shall disclose to every wind Sighs to nourish magazined, Sped by Love, imp chubby-chinned

130

From far-West to Orient Ind, 31 Himalaya's heights abscind32 135 Towering peaks unimagined, Ruby, pearl, and diamond-mined, Bright as eyes of Rosalind, From the common of our kind. Far as Bunn from Friederich Kind 33 Dead from matter proteined, Scotch brose from soup terrapin'd, 34 Soil by Despots' sway gangreened (Charlemagnes schoolless, un-Alcuin'd, 35 Slaves to passion like Lucinde)36 Where Clive's lightning-eye, unscreen'd,

140

Head-veiled, brows knit, mad-chagrined, Witting how thou hadst overweened, In thine own net caught and pinned, Shareless in the Traitor's fund Struck thy guilt, false Ormichund. 37

145

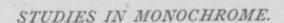
150







Through Cathay, where bined and trined ⁵⁸ Talismans quaint-cut and lined, Sun and moon's career can bind:	
Orange blossom, flowers of Lind 39 Poppy head, picked leaves dry-kiln'd,	155
Stirring juices unpepsin'd, Substitute potations gin'd,	
Cane-decoction saccharined,	
Brew hop-pressed or métheglin'd, Served in casks of Coope and Ind.	160
Land of eld, unorigined!	
Where rose blooms on stalk unspined, 40 Flowers are wove from grassy bind, 41	
Fierce heats strike dead, hail-storms blind,	165
Porcelain towers frail-underpinned	
Topple; shadows grimalkin'd,	
Lanterns, masks, shapes hobgoblin'd,	
As in camera magic-shined	
Riot, host undisciplined!	170
O'er hot-blast dried plains of Sinde	
Ameers traverse palanquin'd;	
Shores where swarthy Moor cross-shinned,	
Sits near God's-folk gaberdined	
Cities Turk'd, Jew'd, Bedowin'd,	175
[To expiatory woes destined;]	
Sea-sands desolate pulverined, 42	
Strewn with dug graves Ghûl'd and Jin'd43	
From where first shows manikin'd,44	
	180
Pant'looned, clowned and harlequin'd, The antique drama undermined;	100
Land be-Guelphed and Ghibellined,	
Ciceronian, Catilined,	
Sea-girt Alped and Apennined,	
Crown of nations prédestined.	185
Crown of nations predestined.	103



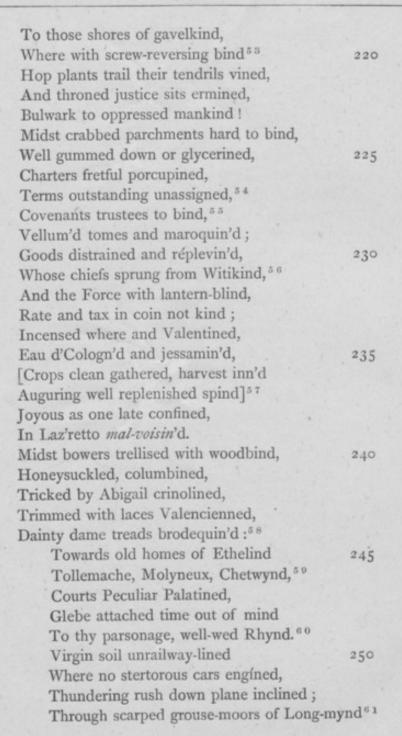
13

Home of chant unviolin'd, Soft as catspaws velveteen'd, Vesper choir raise cherubin'd With chords vocal unrosined,45 (Harp Æolian swept by wind), Midst dim aisles and arches groined, O'er daïs solemn baldaquin'd! To where "rude Carinthian" hind46 Fur-clad, in woods larched and pined, "'Gainst tired traveller" meek inclined, 195 [Ghost on slippery paths pruined* Blocks erratic or lavined, Glaciers' snows eternal, rind]47 Thirsty, footsore and forpined48 (Coarse as deep-sea creatures finned, 200 Or th' invectives of Karl Blind), When gnat tiny horn doth wind, And safe daylight hath declined, Wine nor water-cup propined, +49 "Shuts his door" midst Alps un-inned; 205 Or where milk-maid pannikin'd, Mindless of great Dedekind, 50 (Peer to cometary Hind) Sentinel to the Zodiac Signed, Near scarred plains of Hohenlind, Crumbling ditches erst fascined, Heights with frowning terrors lined, Winsheim, foster town to Pfründ, Snatched from Flachsland's dull gemeind, Nurnberg's, Sculpture's "wunderkind," 51 215 Or fat swamps of Swienemünd, 52 Roams the pastures richly kined; On, still on, through ocean brined,

^{*} Pruinate—i.e., covered with hoar frost—is used by Gray.

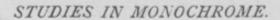
† Aliter—Milk nor mountain-dew propined.











15

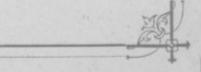
Jutting crags and gorges chined, Unmorassed and deep ravined;	255
Back to where pouch, purse, unlined Tracking moose-deer royal-tined, 62 Powder spent and game unginned,	
Stalks red Indian mocassin'd,	
With each mortal thing unkinned Heaven's light comforting the blind 6 3 To those tones of Orpheus twinned,	260
That could death's decree rescind, Soft as notes of Jenny Lind	
Ere by Time's harsh sickle thinned, 64 Thy swéet name, déar Rosalind !65	265
Rose smells sweet and soft spells lind, 6 6 Soft, smooth, sweet, spell Rosalind.	

TO ANOTHER ROSE.

Meteors quenched, lulled Passion's wind— Heart of my heart, my mind's mind, 67 Shine forth day-star Rosalind!

April 8, 1876.

Athenaum Club, March 22, 1876.



J. J.

16

II.

IMPROMPTU.

How many times are you advised
May impromptus be revised,
Touched, retouched, and criticized,
Lengthened, heightened, analyzed,
With thought's ploughshare fertilized,
Yet remain impromptus prized;
Free creation recognized,
Cream self-risen eulogised,
Music self-extemporised,
Jove's Athene improvised,
In hot vein and mood devised,
Fancy's brood uncompromised?

SMITH'S PRIZE QUESTION.

Cambridge, February 29th, 1875.

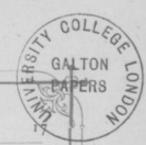
III. AND IV.

SHOREDITCH BELLS.

(Suggested by hearing a Lecture delivered to the Working Classes at Shoreditch Town Hall. 70

Hailed by me as Homonym (To light-laughing Beatrice Jim) Sound at heart and lithe of limb, Bold to ride, like cork to swim; Aye, when shades of eve fall dim, And low wheeling swallows skim, Prompt to seize the goblet's brim, My poor pencil fain would limn Shade! forgive! of Bobbin-Tim

5



(Light mere flickering on the rim) Some faint traits remembering him. 7 1	10
It is not a passing whim That did fire his soul to climb, But a solemn invowed hymn True as steeled the heart of Pym; Pure as breathed by Seraphim, Or wing-outstretched Cherubim, To outlast the tooth of Time.	15
When the bells of Shoreditch chime (Ringing peals like those of Nimes!) ^{7 2} Legendary lore and rhyme, Halls ablaze with light of lime, Flower-shows redolent of thyme,	20
Concerts, balls, diverting mime, Rollicking Falstaff, Bardolph, Nym, Pleasant pic-nics, shav'n lawns trim, Croquet partners fair and slim, Jolly parson with broad brim,	25
Solemn Chadband, sour-faced "Sim," Churning fancies queer and grim, Have no charms to master him.	30
His delight and dear pastime When the bells of Shoreditch chime, And rich juices turn to chyme, Is to purge from dross and slime Sons of sweltering toil and grime; This his dedicatory dime	35
This his dedicatory dime, This his high ambition's cime— Thine piled ingots, Deaconsheim! Thine Fame's bauble, poet Gleim, 74 Thine Tune's pitch-fork, Brompton Hime, 75 Faranight's to make hay in time, 76	40





And run cables to a *prime*,
Catching fledgings with bird-lime. 7.7

Love's to sprout in every clime,
And since poverty's a crime,
Mine to enrich impoverished rhyme.

L'ENVOI.

Done, 'twixt two and three, pray! mind, On his musing couch reclined, Sleep seems to have left behind, 50 Shunning an unquiet mind, Vexed with self and all mankind-Wondering now how blows the wind, Seeking now Fate's knot t' unbind, Now the enigma's key to grind, 55 Why once kind has turned unkind! And why heav'n has so designed That one sole of all his kind, To true friendship most inclined, Though he never has repined, 60 And scorns to, save to ocean brined, Still should prove in friendship blind! By him who himself has signed . Lennox! true in heart and mind, Thine as writ below you'll find.

J. J. S.

45



Ritter Courcy.

(Translated from the German.)

I found this ballad many years ago in a sort of miscellany, edited, I think, by Lenz, of German pieces in verse and prose, and as far as my memory serves, the names Sinclair (Crystallin) were attached to the title—one of which names I remember subsequently reading in Rosencrantz's Life of Hegel was the real or assumed name of a university friend of that philosopher in his youth. The Kinsale family are the present representatives of King John's De Courcy. The translation as first produced agreed word for word with the original, and although subsequently touched up here and there without the original being at hand cannot differ much from it even in its present shape, and I believe will be found on comparison to surpass it as a composition. It is said that on one occasion of the Hat privilege being claimed and exercised by a De Courcy in the presence of George III. and Queen Charlotte, the former remarked that although the Earl was authorised to keep his hat on before the King, it was scarcely the act of a gentleman to remain covered in the presence of a Lady.

The scabbard from him hurled,

He smote the ground and said

"Come one! come all the world!

"Shame on the churl who lags,
To knighthood's faith forsworn,
When tongue of foeman wags—
To speak his country scorn!

"True, as I Courcy hight,
Dar'st thou the battle claim,
I'll prove in mortal fight
Thou hast lied 'gainst England's name."
Then o'er the barrier sprang
Who spoke the boastful word
That Gallia's praises rang
And England's honour slurred.



They hurtle, grip, divide,
And long the strife endured,
Till through the Frenchman's side
Brave Courcy drove his sword.

So when the foe had paid

Dear vengeance for his vaunt,

He whirled on high his blade

And breathed the haughty taunt:

"Ye've seen this arm strike down The champion of you all, Who dared the Briton crown His head before the Gaul:

"But I before the sight
Of King and all his realm
Shall claim the conqueror's right,
And thus I don my helm.

"And who doth dare gainsay
This helm shall here remain
With him, be who he may,
I'll do the fight again."

The French King from his throne
Then spake the knight unto;
"Though wrong to thee was done,
More grievous wrong dost thou—

"To quit these lists with life
Thou shalt not hence go free,
Till thrice in mortal strife
Thou hast made good thy plea.

"Who taunts with tongue so graceless Should forfeit pay for three, And thrice must thou go scaithless If thou would'st ransomed be." "Girt with my well-proved steel
I brave the unequal odds,
And welcome thy appeal
In England's name—and God's."

Then thrice a mounted foe
Into the lists spurred on,
And thrice each Gaul lay low,
And thrice brave Courcy won.

" My rightful plea's maintained,
I stand to what I said,
The prize I sought I've gained,
Nor stoop to bare my head."

Then many a knight rushed forth Into the blood-stained field To prove his country's worth And bid proud England yield.

But spake the Monarch well*
Who sat on Gallia's throne,
"His own wrong to repel,
This wrong to us he has done.

"Tis but what we enforced,

Let him in peace go free,

For he hath well discoursed

His bold and valiant plea.

"So let in record last
What we this day have borne,
He blows an empty blast
Who speaks proud England scorn."

^{*} I remember that the word translated well was gat in the original, meaning kindly, well disposed, and that it was with great compunction I allowed myself this liberty of variation, from which may be inferred the extreme precision of my rendering, which was literally word for word as it stood at first. Quære, Can Sinclair (if that was the German author's name) himself have translated from the English, and if so where is the prime original to be found or sought for?

Then where the Monarch sat Courcy uncovered, kneeled, Rose, bowed, put on his hat And galloped from the field.

So, homeward when drew near That knight all unafeared, And England's realm did hear The deed that he had dared,

In jewelled pomp and pride
King John upon his throne,
The princes by his side,
And nobles round him shone;

There foremost 'midst the throng,
The bold De Courcy's led,
Still with his beaver on,
As thus the Monarch said;

"For England's name and praise
Thou did'st go covered there,
Think not thy helm to raise,
Thy head for me to bare.

"Through all our kingdom's pale
Let this the token be!

That England ne'er may fail
In heroes like to thee.

"For aye who Courcy hight
And holds De Courcy's land,
Shall covered claim by right
Before the King to stand."

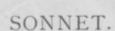
Three Pieces from the Seelenmuth of Jablonski.

DEDICATION.

As vapor ris'n from the sea
Distills to earth in dews,
By equal law returns to thee
My tributary muse.
To thee, the fountain of my song,
My purest, dearest thoughts belong!

As many a hidden flower by night
With leaves enfolded lies,
But with the coming of the light
Its fragrant odours rise,

Or as upon the grassy blade
The sun reveals the dew,
I owe and vow, thou worship'd Maid!
My brightest beams to you.
To life, to light, fresh wakened now,
The sunshine of my soul art thou!



Calm pure and mirroring the blue above,
To whom comminglingly my life's streams flow,
Making that one which many seemed but now,
Thou art the sum and ocean of my love!*
What though my soul rebellious pulses prove!
These are the gusts that o'er the surface play,
The fleeting colours painted on the spray,
They cannot in its depths old Ocean move.

Whilst in th' elysium of thy love I dwell, And at its lucid fountain in thine eyes Immortal longings of the soul allay,† Vainly thy pride's dissembling lips devise How best the dear conclusion to repel, The silent message of those orbs unsay!

* Dr. Ingleby suggests to me as a parallel passage to this line the following, from Keble's Evening Hymn:—

"Till in the ocean of thy love
I lose myself in Heaven above."

+ This recalls Ben Jonson's lines to Celia-

"The thirst that from my soul takes rise Doth ask a drink divine."



DESTINY.

Why should I feed on contumely and wrong?
To me more lofty destinies belong;
Why should I lavish on one thankless face
Thought that might bind the homage of my race?
Out of ourselves, by Nature's hard decree,
Vain is our hope, our struggle to be free;
Our life is clay spun on the potter's wheel,
Our barren power is only—not to feel.
Why then accuse the inexorable past!
Shall I be angry at the simoom's blast,
Or that the marble-mocking human skill,
Shaped as a statue stands a statue still?



THE SECTION OF THE SE

Notes.

STUDIES IN MONOCHROME.

¹ Perhaps Monochord, to recall the analogy of this species of composition with Paganini's performance on a single string, might have been more appropriate than Monochrome. There can be no doubt that the continual recurrence of the same rhyme (like the regularly recurring dash and plash of the waves on the seashore) does impart a distinct and peculiar feature to the verse in which it occurs, something akin to that arising from the periodic working and letting go the pedal (as frequent in Chopin's mazurkas), or the continual use of the same sustained note in the bass in what, I think, are called pedal passages in pianoforte music. But in order to make this species of verse composition at all tolerable to the ear it becomes absolutely necessary to secure variety by all other means at the disposal of the composer, as by incessant change of ideas, of passage to and fro between serious and comic, getting into and out of the saddle of one's Pegasus, of cæsura, of partitionment of the given number of syllables into words (which by the way gives rise to sixty-four distinct genera of seven-syllabled lines, of which monosyllabic and monorematic lines are the extreme cases), and grouping of the lines into stanzas, of unequal extent. It seems not ill suited to a composition which, like the epistle to Rosalind, may be regarded as coming under the denomination of the Mock Heroic. I ought to acknowledge the considerable obligations under which I lie to the Rev. Alexander Taylor and to Dr. Ingleby for supplying me with many rhymes some of which might probably, and some would certainly, otherwise have escaped my notice. I am also indebted for one or two very valuable ones to Mr. F. B. Montgomerie, of the Athenæum Club. I have even a still higher obligation to recall to my kind and accomplished friend Mr. R. S. Maskelyne, of the British Museum, who was so good as to go over the whole of the epistle with me, and either suggested or by his candid criticism led the way to a most material improvement in two of the lines referring to China, which throw almost a new air over the bird's-eye phantasmagorial view attempted to be conveyed of that vast Empire. In Southey's nursery-rhyme description of the Cataract of Lodore there are passages which, without being identical with, remind of the effect of what I have called monochromatic verse. But in "The Assemblies of Hariri" we have the very thing itself, as pointed out to me by my accomplished friends Mrs. and Miss Hertz. Hariri, by the bye (who was born 1054, studied at Bussora, and died 1122), held the political office of "Saheb-al-Khabar," the functions of which consisted in "collecting and instructing the central authority of the events which happened in the country; " in fact he was at the head of what



we now call "the Intelligence Department" of that day, the Charles Brackenbury of the 11th century. Here is a specimen copied from the wonderful translation by Rückert (Stuttgard und Tubingen, 1844) of the wonderful original:—

> Gesegnet sei der Gelbe mit dem lichter Rand Der wie die Sonne wandelt über Meer und Land In jeder Stadt daheim, zuhaus an jedem Strand Gegrüsst mit Ehrfurcht, wo sein Name wird genant Er geht alswie ein edler gast von hand zuhand Empfangen uberall mit Lust, mit Leid entsandt.

And so on for twenty lines in all. There is also, I find, a string of verses composed by the Bibliopile Jacob (Théophile Gautier) in answer to an invitation to dinner from M. Garnier, the architect of the New Opera in Paris, all ending in the same syllable on:—

Garnier, grand maître du fronton, De l'astragale et du feston, Mardi, lâchant là mon planton Du fond de mon lointain canton, J'irai chez toi, tardif préton, Aidont mes pas de mon baton Et précédé d'un mirliton,

And similar doggrel amounting to sixty lines in all.

2 I hope I may be forgiven for quoting from a letter written by my rancorous opponent in this conflict, in which it is only fair to say that the work of a few hours on his part is compared with the result of the protracted although intermittent study of three or four weeks on mine. It was the case of Apollo with a Jews' harp versus Marsyas armed with a seasoned Cremona. "Before such a tour de force I stand mute, like the amazed European when an Indian juggler is in full activity; and when I hear it said that I set it in motion, I sit and stare like old Thames over his urn at the fleets of the world entering his waters. From such small beginnings do such wonders come!" Call you this railing? Again the same most ingenious and somewhat quizzical correspondent writes: "So powerful a will must in time disintegrate the dictionary like water on a lump of sugar, and make every final syllable flow into the channel of Ind; in fact,

" 'Language all is Sylvest'rined In the light of Rosalind.'"

When the above was written the poem extended to only two-thirds of its present length.

Yet like Marsyas stript and skinned.

It may save some of my female readers (if I have any) the trouble of referring to their Lemprière or Dr. Smith if I tell them that Marsyas was the son of a Phrygian peasant who picked up the flute dropped by Athene in disgust on observing in





the water the manner in which her features were distorted by playing upon it. Once breathed upon by a goddess it emitted of itself the most beautiful strains, and elated by his success Marsyas was rash enough to challenge Apollo to a musical contest, of which one condition was that the victor should dispose as he pleased of the vanquished. The contest was waged with doubtful success on either side until Apollo joined the tones of his voice to the breathings of his lute. Lovely myth!

Each chance slurred noté solemn hyn'd.

There can be no doubt that lin'd in Shakespeare is the word limned with the m omitted, and similarly we may claim to use hyn'd for hymned.

⁵ Daisy crushed by harrowing tynd.

Tynd is Scotch for the tooth of a harrow. The allusion is to Burns' "Address to a Mountain Daisy":—

"Till crushed beneath the furrow's weight."

Professor Bartholomew Price informs me that tynd in the same sense is also "good Gloucestershire," the county of his birth.

6 Music score sans holding bind.

A bind or tie is a mark between two notes of the same value to signify that the latter of them is not to be sounded but to be held down, the echo of the preceding note in the ear serving to maintain the harmony and at the same time to moderate what in many cases might otherwise be felt to be a disagreeable discord either from the faintness of the echo or, as I conjecture, from some of the harmonies of its primitive dying away in the interval.

7 So hadst thou, heroic Brind!

The author apologises if he should seem to be taking a liberty with the name of one of England's greatest worthies, than to whom England stands to none more indebted for the preservation of her Eastern empire. Had his counsel for prompt action been adopted, the tragedy of Cawnpore might, I am told, have been spared. His name honours the verse in which it appears, and (there being comparatively so few nouns ending in *ind*) the temptation to employ it has been found irresistible by the author. General Brind, like the Heroes of all times, our own Iron Duke perhaps excepted—although this supposed exception rests only on the authority of the Memoirs of one whose name shall not sully these chaste pages—is known for his partiality to the fair sex and has been four times married.

8 Once to celibacy a mind.

Notice the pleasing true tribrach (a rarity in English verse) preceding the final long syllable—also the epigrammatic-like incisiveness imparted to the line by the thrice-recurring sibilant chime between the words trice, once, celibacy.

Ocelia with a sigh combined? Do spells dough our loaves are made with, Bo spells beaux by ladies played with, Ci spells sigh Cecilia's said with.



29

10 Myrtle, almond's peach-hue fine Roses, ivie, eglantine,

The blossom of the almond tree is of a colour resembling but a little darker than a peach blossom—as I had the opportunity of judging for myself by breaking off, with the aid of a jump, a bit of a branch which grew before my window at Dr. Ingleby's beautiful place, Valentines, under the genial influences of whose hospitality, and at the direct instigation of my honoured hostess and her son, the above lines, containing a carcanet and a nosegay, were composed. The flower name may be supposed to have been conferred upon Rosalind, with reference to the blue of her eyes and the pearly white of her complexion, blue and white being the Virgin's colours, exclusively worn in Catholic countries by boys and girls especially named after her, previous to their first communion. Evidence to this effect was given in the course of the Tichborne trial. The flowers are extracted from G. Anthony Stafford's "Femall Glory," 1635. In "The Ghyrlond of the Blessed Virgin" occur the lines:—

"Here are five letters in this Blessed Name,
Which charg'd a five-fold Mysterie designe—
The M the myrtle, A the almond's clame,
R rose, I ivy, E sweet eglantine."

The jewels, with the exception of *lapis-lazuli*, are taken from Revelations, the porderous sacred tome used for family prayer at Valentines being laid on the breakfast table and consulted for the purpose.

11 Fairest O! of lily-kind.

How characteristic the recovered purity of our interjectional sounds O! and Ah! as contrasted with the Irish and German Och! and Ach! of the refinement of the English race.—seizing, so to say, the soul of the sounds and throwing the husk away. Do I not remember, and did I not in a letter written to a lady at the time record the wonderful O! that issued from the breasts around me at the close of one of Joachim's magic renderings (I forget of what piece), superseding the ordinary vulgar forms of applause, betokening the sense of relief of the audience from an enjoyment rendered almost painful from its intensity and seeming to say in audible language "It is too beautiful"?

"A milk-white hind, immortal and unchanged, Fed on the lawns, and in the forest ranged; Without unspotted, innocent within, She feared no danger for she knew no sin."

The Hind and the Panther.

"For one among those rushing deer,
A single one in mid career,
Hath stopped and fixed her large full eye





Upon the Lady Emily:
A doe most beautiful, clear-white,
A radiant creature, silver-bright!"

The White Doe of Rylstone.

12 [O'er smooth pebble-bed patined.]

Patined from patine, as shoed from shoe, housed from house, bricked from brick, or Shakespeare's own "Lean and slipper'd pantaloon."

"Look how the floor of heaven
Is thick inlaid with patines of bright gold."

Merchant of Venice.

A patine is the small flat dish or plate used in the service of the altar.

14 Dew-drop! on which sun hath shined.

These lines are very different from their original form—a clouded vault having become converted into a cloudless heaven. I was very dissatisfied with them when first written, regarding them as a mere conventional description (like the Landseer bronze lions beside the fountains in front of the National Disgrace in Trafalgar Square) arising out of the exigencies of the rhyme—but in composing them my hand seems to have obeyed an invisible influence like the planchette of the spiritist mediums, for my gushing friend informs me that once sitting at a dinner party, and being unable in consequence of loss of voice to do any other thing but look straight before him, he saw, as in a mist, a lady sitting opposite to him, who had the very shine and glamour with a sort of heavenly radiance in the background expressed in this quotation, so that he felt there was some magic in the case, and that the face had formed itself to imitate the sunlit dew-drop.

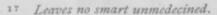
15 Whose light laugh, like bells sweet-chimed.

My confiding friend furnished me with an account of the mixed feelings attempted to be embodied in this and the following lines of the stanza. He tells me that he was once sitting at a public assembly where he was unable to see a lady whose countenance was very pleasing to him owing to the interposition of a foreign though not unfriendly body; this gave him a distinct sense of pain and sort of heart-ache, which, when he heard occasionally the ring of her musical voice and the thrill of her exquisite laugh, diffusing itself like a plaister over the angry surface of a wound, became for the time alleviated and, so to say, medicined. The lines were completed whilst listening to Joachim the peerless drawing his bow at one of the popular concerts in St. James's Hall.

16 Tone-spray tossing on the wind.

Remembering the column of spray which the author has seen sent up over the Horse-shoe Fall at Niagara.





The pleasing character of this line is due in part to the imitative effect arising from the two letters m occurring close together, necessitating successive closings and openings of the lips. The closing stopping the respiration imitates the pain, the opening setting the respiration free, the remedy.

18 To say nay to Rosalind. Aliter—To gainsay coax Rosalind.

The first of these readings is easier for the ear to take in—the latter has more meaning. The aim of the poet should be to produce the maximum of emotion with the minimum of effort to hearer or reader, i.e., the fraction Emotivity, or say

Force Resistance should be made a maximum. Of two such fractions of equal value, the one to be preferred is obviously the one which has the larger terms. Perhaps then the fraction (to be made a maximum) would be more correctly stated by raising its numerator to some unknown power whose index is greater than unity.

19 Courtesie by long-standing fined.

Fined here is used in the sense applied to wine, which is fined by being poured from the wine-press into a vat, where it is first allowed to stand for a considerable time to settle, and then treated with white of eggs to carry down the sediment.

20 Miranda, Portia, Beatrice joined.

Counting the long syllable as a crotchet, in the first word we have two semiquavers in the first and third places, in the second word two semiquavers in the second and third places, and in the third word two semiquavers in the first and second places. This gives a specially agreeable quality to the line which a commonplace digitative prosodist might imagine to have several syllables too many.

21 To whom every heart pays teind.

Teind is Scotch for tithe.

22 O'er cheek stainless nectarined.

"Avoid the chalk, the brick-dust, and the charcoal, and think on a pearl and a ripe peach."—Beechey's "Life and Writings of Sir Joshua Reynolds," 1835, 1, 90. This is in allusion to the colour of a lady's face in painting. My kind and valued friend Mrs. Robert Tait, the learned daughter of a learned sire, and not less modest and gifted with every feminine charm and accomplishment than learned, who has supplied me with this parallel passage to my "pearl and nectarine," adds "This is fine, but I think your allusion to the nectarine is an improvement on Sir Joshua." Stainless conjoined with nectarine implies that the resemblance

in this case is meant to apply not in point of colour but of softness, smoothness, and perfection of form. Notice the chromatic apposition of two associated ideas occasioned by the vowel chime between *faint* and *stainless*.

23 Or swarm gathering pet Gleminde.

Sophia Dorothea Gleim, the witty and gifted niece of "Anacreon" Gleim, who kept house for her uncle and presided at his Sunday receptions, was celebrated under the pet name of Gleminde by a "swarm of young poets" who hovered about genial Father Gleim, as he delighted in being called.—Nouv. Biog. Univ., Art "Gleim."

24 Redolent of youth undwined.

Dwine is the root of our word "dwindle," and is used by Chaucer and Gower to signify fading.

25 Stooping Venus ! Circe-eyne'd.

The idea of the latter part of this line was taken from the picture of Circe by Sir Joshua Reynolds in the recent Academy collection of the Old Masters at Burlington House. We say "Juno-eyed," "ox-eyed," "bright-eyed," as we say "thick-lipped," "bow-legged," the quality to be described having reference to each eye separately taken; but "Circe-eyne'd" refers to a quality dependent upon the joint action and angle of inclination between the axes of the two taken collectively, and is therefore correctly formed from the plural eyne.—As regards the expression attempted to be indicated, conf. Odyss. K' 238:—

'Ράβδω πεπληκύια, κατὰ συφεδισιν ἐέργνυ,

which may be ideally rendered—"Striking them speechless with the beam of her eye (Gwendolen's "dynamic glance"), she (the Enchantress) shut them up among the common herd." The Circe-eyen may appear at first sight to be inconsistent with the rest of the description, but are not so in reality. No student of feminine nature but must have noticed the singular change that for the moment comes over the expression of young girls when, or shortly after having been, subject to the excitement of dancing or acting. In connection with this subject read a book now nearly forgotten but ever true to nature, Mrs. Inchbald's "Simple Story." So, too, in the line "Saucy-sweet and cruel-kind," the first appellative is not meant to convey the habitual expression, but a certain occasional charming saucy toss of the head attributed to Rosalind on her recognising a friend or acquaintance at a distance in a room.

26 Maidenhood unindovined.

----Pictoribus atque Poetis

Quidlibet audendi semper fuit æqua potestas,

Indovined from Ital. indovinare, as divined from Fr. diviner; if the word does not exist in our language it ought to, and I claim the right jure poeta as a fee due to my protracted and not altogether unsuccessful toil in a new species of English

composition to call it into being to my own great gain and the benefit of all future versifiers—it is the sole liberty of the kind (if liberty it be) that I have presumed to take with the authority of prescription. A line with the syllabic partitionment 3, 4, and so full of syzygy as the one above, is too precious to be sacrificed to an orthographical scruple.

27 Fancy-free fares Rosalind.

And the Imperial votaress passed on
In maiden meditation fancy-free,

Mid. N. Dr., ii 2.

Fare, according to Johnson, is to go, pass, get on.

28 Clasps great-grand-maternal bind;

Meaning the buckles of her great-grandmother, worn by Rosalind at the "gay Ball of Fancy," and poised on a chair to exhibit to a bevy of her young female companions. The buckles were circlets of gold set round with seeming brilliants Compare Kit Marlow's "Passionate Shepherd to his Love," Palgrave's "Golden Treasury," p. 4:—

"A gown made of the finest wool,
Which from our pretty lambs we pull,
Fair lined slippers for the cold,
With buckles of the purest gold."

Dr. Ingleby informs me that in the third line fair = vair = vaire = fur, which gives much more meaning to it. The shepherdesses of our day have transferred the vair from the slippers on their feet to the rink-bonnets which form their very becoming head attire. Evans, in "The Merry Wives of Windsor," III., i., quotes one verse out of this madrigal, on which Izaak Walton observes, "Old fashioned poetry but choice good."

- [Sealed, "writ large" and countersigned.]
 "Presbyter is but Priest writ large."
 - 30 Or shop deux ex-premières mind.

The deux ex-premières are the young ladies, Mesdemoiselles Charbonnel et Walker, who announce themselves as such from "Boissier in Paris," at 169, New Bond Street, near the hall where lately hung pictures of fairy-land painted by the tender spirit Frederick Walker. The bon-bons, coffee, and chocclate served by these delicate ministers of delight may be safely recommended as something exquisite to ladies after doing their shopping in this Eternal Street of elegance and fashion. Rumour whispers that Rosalind once sipped chocolate there and became known to the presiding deities of the place as, cette fille ravissante si douce et gracieuse pour tout le monde.

The line "Fairest O! of lily-kind," a great favourite with the author, which starts and gives the key-note to the Invocation, was suggested by a picture of

Frederick Walker's, containing a row of lilies standing there like fine ladies in the foreground.

31 From far-West to Orient Ind.

The message takes the circuit of the world contrary to the course of the sun; from the far-West through China to India, the shores of the Mediterranean Italy, the Austrian dominions, Bavaria and Germany generally, the shores of the Baltic, England, and back again to America, where the author is on his way to receive and propagate it.

32 Himalaya's heights abscind.

The word abscind is said in the dictionaries to be "of very rare use." I have employed in my Memoir on the rotation of a rigid body in the *Phil. Trans.* a word of kindred form—ablimination—to signify the act of preventing a certain quantity ever appearing, as elimination signifies the act of extruding it when it has appeared. Thus, what Jacobi has termed "the elimination of the node," I should call with more perfect propriety its "ablimination." The former word means driving out, the latter driving off.

32 Far as Bunn from Friederich Kind.

Bunn is Alfred Bunn, the "Poet Bunn" of Punch, author of plays and libretti, and in especial—if I rightly interpret a passage in a number of Punch (1847, p. 1244) about the time of Bunn's declension to becoming stage-manager of the Surrey Theatre—librettist to the English version of Balfe's "Bohemian Girl." Friederich Kind (born at Leipsic 1768, died at Dresden 1843) was the author of various poems and dramatic works of recognised merit and of the text of Weber's "Der Freischütz."

34 Scotch brose from soup terrapin'd.

Terrapin is the land turtle. Baltimore is celebrated for its terrapin soup as also for its Bay oysters, and I think I have been told for canvas-back ducks, likewise for the elegance of its ice creams and, as all the world knows, for its bellissime ragazze.

35 Charlemagnes schoolless, un-Alcuin'd.

Alcuin not only caused Charlemagne to establish schools, but put him and his whole Court to school, making them go through a regular course of study and recitations.

36 Slaves to passion like Lucinde.

"Lucinde" is the name of a novel of a by no means edifying character published by F. Schlegel, Berlin, 1799.

37 Struck thy guilt, false Ormichund.

No need, I suppose, to recall the story of the double treaty or Macaulay's account of the scene when Clive struck dismay into the soul of the miscreant with the words "Ormichund, you are to have nothing."

38 Through Cathay, where bined and trined.

The Chinese (I have heard) attach mystic importance to combinations and permutations of duads and triads, and there exists in their literature whole volumes devoted to the subject.

39 Orange blossom, flowers of Lind.

Lind is used in Chaucer for the linden or lime tree, and the flowers are used to scent the higher qualities of tea.

40 Where rose blooms on stalk unspined.

The skill of the Chinese in budding and grafting is proverbial.

41 Flowers are wove from grassy bind.

Alluding to the paper made from bind-grass and the artificial flowers fabricated therewith.

2 Sea-sands desolate pulverined.

Pulverine is a term given in Ure, and signifies the ashes of Barilla, the carbonate of soda of commerce, obtained by burning plants on the sea shore.

42 Strewn with dug graves Ghûl'd and Jin'd.

"To the boldest soldier of the dominant race the sacred book was unintelligible and served only as an amulet to keep off Jina and Ghûls."—Chenery's "Assemblies of Al Hariri." Introduction p. iv.

Ghûls (or Ghouls, as the word is more commonly written) are believed in the East to be in the habit of resorting to graves for the purpose of satisfying their unclean appetite for feeding on human flesh.

44 From where first shows manikin'd, Pant'looned, clowned and harlequin'd.

Puppet shows and pantomine are generally supposed to have become first domesticated in southern and central Italy respectively.

45 With chords vocal unrosined.

Viz., the "chordæ vocales."

or onward where "rude Carinthian" hind.

Or onward where the rude Carinthian boor,

Against the houseless stranger shuts the door.

Goldsmith's "Traveller."

47 Glaciers' snows eternal, rind.

Rind is old English for trozen to death. Lavine is French, and if it is no ought to be English too, for Avalanche.

48 Thirsty, footsore and forpined.

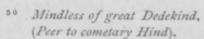
Forpined is Chaucerian and Spenserian for pined away.

49 Wine nor water-cup propined.

"Some drop of graceful dew to us propine."-Chaucer.







Dedekind is a living distinguished mathematical and astronomical writer who has paid particular attention to the figure of the earth and the equilibrium of a rotating fluid which might occasionally be disturbed by the gyrations of the milkmaid's pail.—Vide Zusatz zu Dirichlet's Problem der Hydrodynamik, 1860; Crelle's Journal, Vol. LVIII., 1861.—Hind is the celebrated observer of that name who has discovered so many new comets.

51 Nurnberg's, Sculpture's "wunderkind."

George Pfründ was born in 1603, in Flachsland, a village in Franconia, near the town of Winsheim, and died at Durlach in 1663. On account of the extraordinary ability he evinced in modelling and wood-carving when a boy, and previous to having received any instruction, he was sent by Herr von Grailsheim to study at Nuremberg, which seems to have been regarded as the University of German Art in those days. Besides his skill in various branches of the sculptor's and carver's craft, he became, like Michael Angelo, an able engineer and served in that capacity under Duke Bernhard of Weimar at Nordlingen, where he was taken prisoner, and subsequently at the siege of Breysach. He completed his artistic education in Lyons and Paris.—Vide "Historische Nachricht Von den Nürnbergeschen Mathematicis und Kunstlern von Johann Gabriel Doppelmayer, Nürnberg, 1730." I imagine that Pfründ may be only an archaic form of Freund.

52 Or fat swamps of Swienemund.

Swienemund is a town in Pomerania on the left bank of the Swiene, and near its entrance into the Baltic.

53 Where with screw-reversing bind.

"Bind is a stalk of hops twining round a pole."-Worcester's Dictionary.

It always forms a *left-handed* coil, whereas the vine tendril like a corkscrew or a screw-propeller forms a *righthanded* one. Sir William Thomson, of Glasgow, was wont to say that he derived the most lively notion of the existence of Space of four dimensions from the necessity he felt for the existence of a *Continuum* in which one of these coils or helices could be derived from the other by a process analogous to that whereby a right-angle triangle with its hypothenuse to the left can be rotated and reversed so as to have its hypothenuse lying to the right in Space of the ordinary kind.

54 Terms outstanding unassigned.

These words have a legal signification with which I became familiar in the course of my conveyancing studies in the chambers of the late Francis Turner and Peter Brodie. They refer to getting in the legal estate (as it is called) in a long lease vested for the support of certain incidental trusts.

100

题



55 Covenants trustees to bind.

The word bind in this line occurs also in the one the fourth above it, but used in quite a different sense. Dante in his play upon three rhymes in Canzone XV. commencing "Amor tu vedi ben che questa donna," continually reiterates the same words in adjoining lines even in the same sense, and in one instance the same word freddo occurs in three consecutive lines, 23, 24, 25.

How came so sublime a genius to condescend to such a seemingly puerile amusement? I think a sagacious remark made to me by the present learned Dean of Lincoln supplies the clue. On my mentioning to him my Studies in Monochrome, his thought as an old educationist immediately flew to its practical uses, and he said to me "Would not such sort of exercise serve as the best disciplinary preparation for writing rhymed verse?" "Unquestionably, yes" (although I had not previously thought of this use of the study) was my reply.

50 Whose chiefs sprung from Witikind.

Witikind was a Saxon chief contemporary of and rebel against Charlemagne, who eventually offered him terms and stood Godfather to him on his embracing Christianity. He was killed in 807 in a conflict with a Duke of Swabia and buried at Ratisbon, where his tomb is still to be seen.

57 Auguring well replenished spind.

Spind or spinde is old and provincial English for a larder.

bs Dainty dame treads brodequin'd.

Compare the effect upon the tympanum of the word treads with that of steps which first occupied its place: the former word collects into a focus as into a sort of Dionysius' ear all the leading sounds of the environment—it remembers the dropped t sound of "dainty" and prepares the rd sound of "brodequin'd."

59 Tollemache, Molyneux, Chetwynd.

Observe that the accent on Chetwynd need not be transferred to the second syllable of the word—the first syllable although per se long becoming relatively short to the ear in consequence of the length of time expended upon the final syllable of the preceding word, and on the inevitable suspension of the breath in passing from it to the syllable following: a very note-worthy phenomenon.

60 To thy parsonage, well-wed Rhynd.

Vide "Clergy List, 1876," under name Rhynd.

61 Through scarped grouse-moors of Long-mynd.

See description of this long stretch of country, a sort of horn-book to the geologist, in H. Kingsley's novel of "Stretton," Vol. 1:—"On the one hand the Long-mynd rolled its great sheets of grouse-moor, and scarps of rock up fold beyond fold," &c.







62 Tracking moose-deer royal-tined.

"Royal antler is the third branch of the horn of a hart or buck which shoots out from the rear or main horn above the bezantler."

"So much the rather thou! Celestial Light,
Shine inward, and the mind through all her powers
Irradiate! There plant eyes, all mist from them
Purge and disperse—

Paradise Lost, Book III.

64 Ere by Time's harsh sickle thinned.

A mere stroke of the imagination. The author apologises to this honoured lady, as also to the patriotic and well-worthy of admiration Karl Blind, that the exigency of his rhymes has compelled him to take these liberties with their names.

65 Thy sweet name, dear Rosalind.

The accents are intended to indicate that the words in the line are not to be taken trippingly off the tongue, but to be as it were dropped from the lips one by one like olives bubbling out of the mouth of a narrow-necked bottle. To support so vast and heavy a superincumbent mass of sound as this last line of the period has to bear, need is that it should be made of extra breadth and strength. Obvious truism as it is, people are still not generally alive to, or do not practically realise the fact that Poetry is addressed immediately to the Ear and only secondarily to the Eye as a guide to the ear.

* Rose smells sweet and soft spells lind.

Lind=Soft, mild.

Tauchnitz' German Dictionary,

67 Heart of my heart, my mind's mind.

This line may recall to the captious critic Cicero's too celebrated "O fortunatum natam me consule Roman," but let him remember also Pam's dictum, "Dirt is only matter in its wrong place."

IMPROMPTU.

68 Music self-extemporised.

The late Sterndale Bennett, in whose conversation (although not generally considered his strong point) I took great pleasure, because I could put my mind alongside of his on his own special pursuit, once kindly made me a present of his very agreeable "Preludes and Lessons." (I turn to the title-page and find the date Nov. 13, 1871.) "How beautiful," I said to him shortly afterwards, "is the lesson No. 22, the one to which the verses of Tennyson are prefixed:—

- " 'A spirit haunts the year's last hours
 - 'Dwelling amid the yellowing bowers,
 - 'To himself he talks."









This, I may remark, is the only lesson of the series to which any poetry is attached.

Bennett's reply (spoken with his characteristic simplicity) was "I did not make that music, it made itself—it flowed from the 'words.'" This explains what I mean by music being self-extemporised.

On another occasion I asked him if he had ever heard that he had been made the hero of the musical novel "Charles Auchester." "One of my sons told me once something about it," said he, "but I have never found time to read the book."

On another occasion I quoted to him an observation made to me by Miss Macirone (of 5, Park Village West-my gifted and inspired teacher of the vocal art, Mendelssohn prize scholar of the Academy of Music, of whom Bennett once said to me "We were all proud of Clara Macirone.") The observation was "You must learn to like discords." Bennett replied, "I wonder if we could learn to live on a milk diet without pepper or other condiments." Whilst on the subject of music I may mention that it fell to me to notice that time and tune stand to each other in the same relation as in the sister art of painting, form and colour. This observation I subsequently found mentioned either in Burnet's or in Hawkins' History of Music had been made long ago by some Italian whose name I cannot recall. But what I think has never been noticed is that there is no affection or sign of modification whatever of one of these co-factors of musical expression but has its exact counterpart in the other, as ex. gr. acellerando and rallentando are the analogues of forte and piano, syncopation of chromatic progression and so forth, so that music may be regarded as a sort of mystic plane exhibiting the simultaneous development of analogous relations along two heterogeneous axes.

I am also able to explain on the simplest principles of common sense the source of the influence of music over the emotions and the true nature of musical imitation, which (as far as I know) has never been even attempted before.

My principles lead me to the conclusion that Wagner's system is wholly erroneous, peche par la base, and is a step backwards (except so far as it embodies a reaction against over strict adherence to set forms of composition), and will only be regarded as exhibiting the true ideal of music when Walt-Whitmanism is accepted as the ultimate phase of the poetic art. What I think remains to be done in this age of unification is to exhibit the principles common to all the fine arts, as painting, sculpture, verse-technik, architecture, &c.—in other words, to establish the new science and draw out a grammar of Comparative Æsthetik. In an account given in the Revue des Deux Mondes of Mathis Lussy's treatise on the laws of musical expression (avowedly intended as a practical guide to executants, boarding-school misses, to supply the want of musical feeling where it does not naturally exist) I find many remarks evincing that the author has arrived





substantially at the same conclusions as my own on the essential nature of musical composition and imitation, and the analogies of music with painting and architecture which I find reproduced also in verse-technik. There is a favourable and interesting notice of this work in the Westminster Review for January, 1876. It seems to have reached already a second edition. Madame Bodichon informed the author that she and several of her artist-friends were exceedingly interested in the statement of the Laws of Verse, in the work by him bearing that name, on account of their seeing revealed there, as in a mirror, the principles of their own art of painting, and his friend Mr. John Lewis Roget took him with him on a pilgrimage to the South Kensington Museum with the express object of showing him with what care the laws of syzygy and the principle of the transverse lines of force were carried out in the water-colour drawings of Turner there on view.

69 Yove's Athene improvised.

Alluding to the ready-made production of Athene with the blow of a hatchet out of Jupiter's skull.

SHOREDITCH BELLS.

James's Street, where we took supper together, neither of us having dined. In the course of the following morning I left with him the piece entitled "Shoreditch Bells" as an Impromptu, which in its then shape was suggested to me in bed, the night after our symposium, by the two sounds Jim and Homonym knocking against each other (like flint and steel) in my brain. It did not attain its existent form until twenty-four hours later, and this gave rise to the doubt about its proper title, to which expression is given in the epigram above. Within a few hours of the lines of "Shoreditch Bells" being left with the lecturer, I received the annexed answer, very slightly emended in one or two places, which I publish without (for a good and sufficient reason) writing to him to obtain his consent to my so doing:—

INCIDENT IN THE LIFE OF A MATHEMATICIAN.

What though in every clime or land Where symbolled truths are shown, Entwined in curly-curious type, Sylvester's name is known?

What though he sees with awestruck gaze
The endless series' limit,
And round him n dimensioned space,
With whirling vectors in it?

What though the gay determinant For him its rows exchanges,



While Hamilton's weird Delta turned (▽)
O'er all the symbols ranges?

What though he can imagine points
Where points can never be,
And circles at infinity
Can measure, touch, and see?

Yet one rich joy the crowning good Remained for him to find, 'Twas not on learning's mountain top, "Mid monarchs of the mind";

Not where the open temple gates
Flash morning on the nations,
And "dying dolphins' sunset tints"
Blaze through the crabb'd equations;

No, 'twas in smoky London town, With gridirons fizzing round him, As on a tavern bench he sat The summum bonum found him.

A better thing than Zeus could bring Far better he did quaff, As, mixing beer and ginger-pop, He first drank Shandy-gaff!

The statement in the concluding line of this spirited effusion is not strictly accurate as the author contracted a familiar acquaintance with the Nectar in question as a means of recruiting his forces after boating on the River Lea, years ago, he thinks with his friend the present Vicar of Hampstead, whom he has known from his cradle upwards, not to speak of dim glimpses of the enjoyment of the same felicity when an undergraduate at Cambridge.

The second of the quotations is taken from the author's inaugural address to the Mathematical and Physical Section of the British Association at the meeting at Exeter. He cannot resist the temptation to transcribe another communication from an unknown correspondent referring to the same address, the authorship of which, written in a very clear and beautiful hand, he would be very glad if this publication should be the means of bringing home to his knowledge. The air, in the quite unprecedented $\frac{\pi}{4}$ time, of the music to which the words are set has really a wild charm about it which does credit to the tone susceptibilities of the "Barbaric Race" amongst whom it originated. It bore the postmark "Cork."

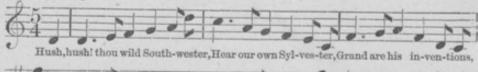




THE STORM-RAVINGS OF THE WILD IMAGININGS OF A "BARBARIC RACE."

A MYTH FOR PROFESSOR SYLVESTER.

Time, $\frac{5}{4}$ unknown: number of bars, 7; key to be investigated mathematically.



Space of four dimensions, "Al - ge-bra's own sis-ter" Thanks her dear Sylvester, "Mu-sic."

A lady to whom I have already expressed my obligations for her information relative to Al Hariri upon receiving a rough copy of this "booklet" sent me (the

day after) the annexed lines-

None but critics most unkind Could be hard on Rosalind. Algebraic master-mind, Helen Faucit's grace refined, Genius, Beauty intertwined, To one dazzling whole combined, In this booklet will they find Who are not perversely blind. Each line is with meaning lined, Oft there's more, much more, behind Than could clearly be defined, Were not copious notes subjoined. Why at mathematic grind For ever, when a man's inclined To other glory? When he's pined With noblest bards to be enshrined, Crown and blossom of mankind, Whom the Muses have assigned A pinnacle; whom Fame hath twined Chaplets ever green to bind Around their brows? Then do not mind Cav'lers, who have penny-a-lined, Who carp and sneer at "ind" or "ind," Whose verse "with thanks" is oft declined, Whose hearts with envy are calcined, Who have never e'en divined How beneath an outer rind Of science, poesy lies mined.

43

Serenely on your oars reclined,
Whether applauded or maligned,
To praise or blame alike resigned,
Be proud! You've written Rosalind!
For its envoi prompt and kind
Take warmest thanks, twice underlined,
From Harley Street sent, sealed and signed.

F. H.

I ought to have printed the above in the old-fashioned form, as Recommendatory Verses, by the Author's Honored Friend, F. H., in front of the poem, but that I felt that so beautiful a Portico would eclipse even more than it would adorn the Principal Building to which it was intended to do honour, as in our Athenæum Club the House is sacrificed to the Vestibule.

71 Some faint traits remembering him.

Pity that this elegant use of the word "remembering," in the sense of bringing back to memory, for which we have the authority of the line,

"The ditty does remember my drowned father."

(Tempest, I, ii.)

should have fallen into desuetude.

72 (Ringing peals like those of Nimes!)

(As observed to me by my accomplished friend Dr. Sibson) Shakespeare's authority justifies the use for rhyming purposes of the English pronunciation of the vowels in proper names as exemplified in his rendering of the sounds of the words Longaville and Dumain in his Princess, aliter "Love's Labour Lost."

- Cambridge, and is I believe still lingering there, to those who agreed in opinions and profession with the late Mr. Simeon—in fact employed as equivalent to "Evangelical." On one occasion his admirers wished to present him with a piece of plate, and on the principle of buying in the cheapest market, forgot themselves so far as to have recourse to a Jewish silversmith, who kept a shop in Cambridge, to supply themselves with the article desired. When this preacher of God's word to a lost race heard of it he declared with indignation that he would not accept a testimonial emanating from such a source. This circumstance occurred when I was an undergraduate at the University.
- 74 Gleim has been styled the German Anacreon. He died at the age of eighty-four, and in accordance with his will was buried in his garden in Halberstadt, where he first saw the light.
- 75 Mr. Hime is a pianoforte tuner in West Brompton (see London Directory).

As Faraday is a synonym for all that is pure and disinterested

As Faraday is a synonym for all that is pure and disinterested in the pursuit of science, so I use Faranight as emblematic of the man, if such there be (as





different from Faraday as night from day), by whom science is only used and valued as a means to an end, as a Branch of Commerce and as a means to achieve Social Aggrandisement.

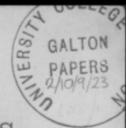
TT Catching fledglings with bird-lime.

Webster says that bird-lime is a glutinous substance usually made by fermenting the inner bark of the holly-tree and mixing the product with nut-oil or grease—used for catching small birds by spreading it upon twigs so as to entangle their feet. There is another sort of bird-lime also used for entangling the feet of small birds and rendering them the easy prey of some of the larger birds of prey which flock about the purlieus of the Court named after Angels into the composition of which enters a good deal of the Oil of Gammon often not unmixed with a considerable dose of Holy Extract.



Sylvester

(Corrected Impression of January 1, 1887.)



MUSIC AND MATHEMATICS.

[Extracted, with variations, from NATURE of December 9, 1886.]

VESTERDAY afternoon meeting at a friend's house a lady visitor to Oxford who was to sing in the evening at one of the hebdomadal concerts given in Balliol College, and the conversation happening to turn on the mathematical lady Professor who adorns the University of that stately Capital which looks proudly down on the confluence of Lake Maelar and the North Stream, my thoughts shaped themselves, as I was walking home, into the following lines, which, if likely to interest any of your readers, I shall be happy to see appear in the world-wide-diffused columns of NATURE.

New College, November 15.

J. J. SYLVESTER.

P.S.—Non-academical readers may like to be reminded that the lyre of Amphion, to the sounds of which the stones leaped to their places in the wall he was building round Thebes, was lent to him by Hermes, the patron of occult science. As a companion picture to the skyscape in the 1st stanza of the Sonnet below, compare the 3rd stanza of my Retrospect—

"Eve's fiery armament furrowing the crimson sky, Like glow by passion lent, like passion's dream to die."

The first line of this may recall to some of my readers, Juvenal's "Quicquid habent telorum armamentaria cæli."

Sat. 13-83.

SONNET

To a Young Lady who was to sing for the first time at a Sunday Evening Concert in Balliol College.

Fair maid! whose voice calls Music from the skies,
Trailing the splendor of you silvery moon
And crimson-blushing West as in death-swoon
On his ensanguined pyre Monarch lies—

Let from their virgin fount those accents rise That bid sad Philomel suspend her tune, Thinking the lark doth chant his lay too soon, Piping that trill, which with her own note vies.

To her whose star shines bright o'er Maelar lake And thee who beautifiest glad Isis' shore Grant! I one joint harmonious garland bind: Thou canst with sounds our senses captive take—She with the lyre Amphion smote of yore, Infuse in Nature's breast, Promethean mind.

THURSDAY, JANUARY 3, 1889.

SCIENTIFIC WORTHIES.

XXV.-JAMES JOSEPH SYLVESTER.

AMES JOSEPH SYLVESTER, born in London on September 3, 1814, is the sixth and youngest son of the late Abraham Joseph Sylvester, formerly of Liverpool.1 He was educated at two private schools in London, and at the Royal Institution, Liverpool, whence he proceeded in due course of time to St. John's College, Cambridge. In these early days he manifested considerable aptitude for mathematics, and so it was not matter for surprise that he came out in the Tripos Examination of 1837 as Second Wrangler; being incapacitated, by the fact of his Jewish origin, from taking his degree, he was not able to compete for either of the Smith's Prizes. In more enlighted times (1872) he had the degrees of B.A. and M.A., by accumulation, conferred upon him, and received therewith the honour of a Latin speech from the Public Orator. He himself says: "I am perhaps the only man in England who am a full (voting) Master of Arts for the three Universities of Dublin, Cambridge, and Oxford, having received that degree from these Universities in the order above given : from Dublin, by ad eundem; from Cambridge, ob merita; from Oxford, by decree." He is now D.C.L. of Oxford, LL.D. of Dublin and Edinburgh, and Hon. Fellow of St. John's College, Cambridge. It is still open for him to receive yet higher recognition from his own alma mater.

Prof. Sylvester became a student of the Inner Temple July 29, 1846, and was called to the Bar on November 22, 1850.2 He has been Professor of Natural Philosophy at University College, London; of Mathematics at the University of Virginia, U.S.A.; 3 then ten years later Professor at the Royal Military Academy, Woolwich; and again, after a five years' interval, Professor of Mathematics at the Johns Hopkins University, Baltimore, U.S.A., from its foundation in 1877. Finally, in December 1883, he was elected Savilian Professor of Geometry at Oxford, in succession to Prof. Henry Smith.4 His first printed paper was on Fresnel's optical theory (in the

Phil. Mag., 1837).

We can here only briefly allude to a communication which was accompanied by many important results: we refer to the Friday evening address (January 23, 1874) to the Royal Institution, "On Recent Discoveries in Mechanical Conversion of Motion." He says :- "It would be difficult to quote any other discovery which opens out such vast and varied horizons as this of Peaucellier's,-in one direction, descending to the wants of the workshop, the simplification of the steam-engine, the revolutionizing of the mill-wright's trade, the amelioration of gardenpumps, and other domestic conveniences (the sun of science glorifies all it shines upon) and in the other, soaring to the sublimest heights of the most advanced doctrines of modern analysis, lending aid to, and throwing light from a totally unexpected quarter on the researches of such men as Abel, Riemann, Clebsch, Grassmann, and Cayley. Its head towers above the clouds, while its feet plunge into the bowels of the earth."

The only works that Prof. Sylvester has published, we believe, are: (1) "A Probationary Lecture on Geometry, delivered before the Gresham Committee and the Members of the Common Council of the City of London, December 4, 1854," a slight thing which had to be written and delivered at a few hours' notice; (2) "Laws of Verse," 1870; (3) several short poems, sonnets, and translations, which have appeared in our columns and elsewhere.

Our notice would be incomplete without some record of the honours that have been conferred upon Dr. Sylvester. He was elected a Fellow of the Royal Society on April 25, 1839; has received a Royal Medal (1860) and the Copley Medal (1880), this latter rarely awarded, we believe, to a pure mathematician. On this last occasion, Mr. Spottiswoode accompanied the presentation with the words, "His extensive and profound researches in pure mathematics, especially his contributions to the theory of invariants and covariants, to the theory of numbers and to modern geometry, may be regarded as fully establishing Mr. Sylvester's claim to the award." He is a Fellow of New College, Oxford; Foreign Associate of the United States National Academy of Sciences; Foreign Member of the Royal Academy of Sciences, Göttingen, of the Royal Academy of Sciences of Naples, and of the Academy of Sciences of Boston; Corresponding Member of the Institute of France, of the Imperial Academy of Science of St. Petersburg, of the Royal Academy of Science of Berlin, of the Lyncei of Rome, of the Istituto Lombardo, and of the Société Philomathique. He has been long connected with the editorial staff of the Quarterly Journal of Mathematics (under one or another of its titles), and was the first editor of, and is a considerable contributor to, the American Journal of Mathematics; and he was at one time Examiner in Mathematics and Natural Philosophy in the University of London. He was not an original member of the London Mathematical Society (founded January 16, 1865), but was elected a member on June 19, 1865, Vice-President on January 15, 1866, and succeeded Prof. De Morgan as the second President on November 8, 1866. The Society showed its recognition of his great services to them and to mathematical science generally by awarding him its De Morgan Gold Medal in November 1887. Wherever Dr. Sylvester goes, there is sure to be mathematical activity; and the latest proof of this is the formation, during the last term at Oxford, of a Mathematical Society, which promises, we hear without surprise, to do much for the advancement of mathematical science there.

The writings of Sylvester date from the year 1837; the number of them in the Royal Society Index up to the year 1863 is 112, in the next ten years 38, and in the forthcoming volume 81, making 231 for the years 1837 to 1883: the number of more recent papers is

VOL. XXXIX.-No. 1001.



^{*} Foster's "Hand-b-ok of Men at the Bar"

3 The late Prof. Key, of University College and School, was the first occupant of the Chair, founded by Mr. Jefferson, once President of the United States, in 1824.

4 He commences has Oxford lecture (NATURE, vol. XXXIII. p. 222), of date December 13, 1885, with the words; "It is now two years and seven days since a message by the Atlantic cable containing the single word; elected me in Ealtimore informing me that I had been appointed Savilian Professor of Ge-metry in Oxford, so that for three weeks I was in the unique position of filling the post and drawing the pay of Professor of Mathematics in each of two Universities."

also considerable. They relate chiefly to finite analysis, and cover by their subjects a large part of it: algebra, determinants, elimination, the theory of equations, partitions, tactic, the theory of forms, matrices, reciprocants, the Hamiltonian numbers, &c.; analytical and pure geometry occupy a less prominent position; and mechanics, optics, and astronomy are not absent. A leading feature is the power which is shown of originating a theory or of developing it from a small beginning; there is a breadth of treatment and determination to make the most of a subject, an appreciation of its capabilities, and real enjoyment of it. There is not unfrequently an adornment or enthusiasm of language which one admires, or is amused with: we have a motto from Milton, or Shakespeare; a memoir is a trilogy divided into three parts, each of which has its action complete within itself, but the same general cycle of ideas pervades all three, and weaves them into a sort of complex unity; the apology for an unsymmetrical solution is-symmetry, like the grace of an eastern robe, has not unfrequently to be purchased at the expense of some sacrifice of freedom and rapidity of action; and, he remarks, may not music be described as the mathematic of sense, mathematic as the music of the reason? the soul of each the same! &c. It is to be mentioned that there is always a generous and cordial recognition of the merit of others, his fellowworkers in the science.

It would be in the case of any first-rate mathematician and certainly as much so in this as in any other caseextremely interesting to go carefully through the whole of a long list of memoirs, tracing out as well their connection with each other, and the several leading ideas on which they depend, as also their influence on the development of the theories to which they relate; but for doing this properly, or at all, space and time, and a great amount of labour, are required. Short of doing so, one can only notice particular theorems-and there are, in the case of Sylvester, many of these, "beautiful exceedingly," which, for their own sakes, one is tempted to refer to-or one can give titles, which, to those familiar with the memoirs themselves, will recall the rich stores of investigation and

theory contained therein.

A considerable number of papers, including some of the earliest ones, relate to the question of the reality of the roots of a numerical equation; in the several connections thereof with Sturm's theorem, Newton's rule for the number of imaginary roots, and the theory of invariants. Sylvester obtained for the Sturmian functions, divested of square factors, or say for the reduced Sturmian functions, singularly elegant expressions in terms of the roots, viz. these were $f_2(x) = \Sigma(a-b)^2(x-c)(x-d)...$, $f_3(x) = \Sigma(a-b)^2(a-c)^2(b-c)^2(x-d)...$, &c.; but not only this: applying the Sturmian process of the greatest common measure (not to f(x), f'(x), but instead) to two independent functions f(x), $\phi(x)$, he obtained for the several resulting functions expressions involving products of differences between the roots of the one and the other equation, f(x) = 0, $\phi(x) = 0$; the question then arose, what is the meaning of these functions? The answer is given by his theory of intercalations: they are signaletic functions, indicating in what manner (when the real roots of the two equations are arranged in order of magnitude) the roots of the one equation are inter-

calated among those of the other. The investigations in regard to Newton's rule (not previously demonstrated) are very important and valuable: the principle of Sturm's demonstration is applied to this wholly different question : viz. x is made to vary continuously, and the consequent gain or loss of changes of sign is inquired into The third question is that of the determination of the character of the roots of a quintic equation by means of invariants. In connection with it we have the noteworthy idea of facultative points; viz, treating as the coordinates of a point in n-dimensional space those functions of the coefficients which serve as criteria for the reality of the roots, a point is facultative or non-facultative according as there is, or is not, corresponding thereto any equation with real coefficients: the determination of the characters of the roots depends (and, it would seem, depends only) on the bounding surface or surfaces of the facultative regions, and on a surface depending on the discriminant. Relating to these theories there are two elaborate memoirs, "On the Syzygetic Relations &c., and "Algebraical Researches &c.," in the Philosophical Transactions for the years 1853 and 1864 respectively; but as regards Newton's rule later papers must also be consulted.

In the years 1851-54, we have various papers on homogeneous functions, the calculus of forms, &c. (Camb. and Dub. Math. Journal, vols, vi. to ix.), and the separate work "On Canonical Forms" (London, 1851). Thes: contain crowds of ideas, embodied in the new word, cogredient, contragreaient, concomitant, covariant, contravariant, invariant, emanant, combinant, commutant, canonical form, plexus, &c., ranging over and vastly extending the then so-called theories of linear transformations and hyperdeterminants. In particular, we have the introduction into the theory of the very important idea of continuous or infinitesimal variation: say that a function, which (whatever are the values of the parameters on which it depends) is invariant for an infinitesimal change of the parameters, is absolutely invariant.

There is, in 1844, in the Philosophical Magazine, a valuable paper, " Elementary Researches in the Analysis of Combinatorial Aggregation," and the titles of two other papers, 1865 and 1866, may be mentioned: "Astronomical Prolusions; commencing with the instantaneous proof of Lambert's and Euler's theorems, and modulating through the construction of the orbit of a heavenly body from two heliocentric distances, the subtended chord, and the periodic time, and the focal theory of Cartesian ovals, into a discussion of motion in a circle and its relation to planetary motion"; and the sequel thereto, "Note on the periodic changes of orbit under certain circumstances of a particle acted upon by a central force, and on vectorial coordinates, &c., together with a new theory of the analogues of the Cartesian ovals in space."

Many of the later papers are published in the American Mathematical Journal, founded, in 1878, under the auspices of the Johns Hopkins University, and for the first six volumes of which Sylvester was editor-in-chief. We have, in vol. i., a somewhat speculative paper entitled "An application of the new atomic theory to the graphical representation of the invariants and covariants of binary quantics," followed by appendices and notes relating to various special points of the theory; and in

the same and subsequent volumes various memoirs on binary and ternary quantics, including papers (by himself, with the aid of Franklin) containing tables of the numerical generating functions for binary quantics of the first ten orders, and for simultaneous binary quantics of the first four orders, &c. The memoir (vols. ii. and iii.) on "Ternary cubic-form equations" is connected with some early papers relating to the theory of numbers. We have in it the theory of residuation on a cubic curve, and the beautiful chain-rule of rational derivation; viz. from an arbitrary point 1 on the curve it is possible to derive the singly infinite series of points $(1, 2, 4, 5, \dots 3/2 \pm 1)$ such that the chord through any two points, m, n, again meets the curve in a point m+n, $m \sim n$ (whichever number is not divisible by 3) of the series; moreover, the coordinates of any point m are rational and integral functions of the degree m2 of those of the point 1.

There is in vol. v. the memoir, "A Constructive Theory of Partitions arranged in three acts, an Interact in two parts, and an Exodion," and in vol. vi. we have "Lectures on the Principles of Universal Algebra" (referring to a course of lectures on multinomial quantity, in the year 1881). The memoir is incomplete, but the general theories of nullity and vacuity, and of the corpus formed by two independent matrices of the same order, are sketched out; and there are in the Comptes rendus of the French Academy later papers containing developments of various points of the theory,—the conception of "nivellators" may be referred to.

The last-mentioned paper in the American Mathematical Journal was published subsequently to Sylvester's return to England on his appointment as Savilian Professor of Mathematics at Oxford. In December 1886, he gave there a public lecture containing an outline of his new theory of reciprocants (reported in NATURE, January 7, 1887), and the lectures since delivered are published under the title, "Lectures on the Theory of Reciprocants" (reported by J. Hammond), same Journal vols. viii. to x.; thirty-three lectures actually delivered, entire or in abstract, in the course of three terms, to a class in the University, with a concluding so-called lecture 34, which is due to Hammond. The subject, as is well known, is that of the functions of a dependent variable, y, and its differential coefficients, y', y'', . . . , in regard to x (or, rather, the functions of y', y'', \dots), which remain unaltered by the interchange of the variables x and y: this is a less stringent condition than that imposed by Halphen ("Thèse," 1878) on his differential invariants, and the theory is accordingly a more extensive one. A passage may be quoted:-"One is surprised to reflect on the change which is come over Algebra in the last quarter of a century. It is now possible to enlarge to an almost unlimited extent on any branch of it. These thirty lectures, embracing only a fragment of the theory of reciprocants, might be compared to an unfinished epic in thirty cantos. Does it not seem as if Algebra had attained to the dignity of a fine art, in which the workman has a free hand to develop his conceptions, as in a musical theme or a subject for painting? Formerly, it consisted in detached theorems, but nowadays it has reached a point in which every properly-developed algebraical composition, like a skilful landscape, is expected to suggest the notion of an infinite distance lying beyond the limits of the canvas." And, indeed, the theory has already spread itself out far and wide, not only in these lectures by its founder, but in various papers by auditors of them, and others,—Elliott, Hammond, Leudesdorf, Rogers, Macmahon, Berry, Forsyth.

Sylvester's latest important investigations relate to the Hamiltonian numbers: there is a memoir, Crelle, t. c. (1887), and, by Sylvester and Hammond jointly, two memoirs in the Philosophical Transactions. The subject is that of the series of numbers 2, 3, 5, 11, 47, 923, calculated thus far by Sir W. R. Hamilton in hiswell-known Report to the British Association, on Jerrard's method. A formula for the independent calculation of any term of the series was obtained by Sylvester, but the remarkable law by means of a generating function was discovered by Hammond, viz. E, E1, E2, . . . , being the series 3, 4, 6, . . . of the foregoing numbers, each increased by unity; then these are calculated by the formula $(1-t)^{E_0} + t(1-t)^{E_1} + t^2(1-t)^{E_2} + \dots = 1-2t_i$ equating the powers of t on the two sides respectively: observe the paradox, $t = \frac{1}{2}$, then the formula gives o = sum of a series of positive powers of 1.

Enough has been said to call to mind some of Sylvester's achievements in mathematical science. Nothing further has been attempted in the foregoing very imperfect sketch.

A. CAYLEY.

THE CREMATION OF THE DEAD.

The Cremation of the Dead. By Hugo Erichsen, M.D. (Detroit: D. O. Haynes and Co., 1887.)

THIS book is an appeal to the general public on the propriety of introducing the practice of cremation, universally, into civilized communities; or, as the authorputs it, "it is a plea for the burning of the dead." He considers, and we are inclined to think he is right, that the period of fanatic and fierce opposition to cremation has passed, and has made way for a calm consideration of the subject. In 1874, he tells us, a Persian gentlemanthen resident in one of the Eastern States of the free and great Republic of America, who wanted to have his wife cremated, was compelled by an ignorant mob to resort to interment; but now the feeling has changed.

In our own country the same sensible desire to discussthe question of cremation, fully and freely, is fairly established at the present time; and so greatly has prejudice disappeared, that now the act of cremation has beencarried out over fifty times at the Woking Cemeteryalone. As Sir Spencer Wells shows, in an introductorychapter which he has written for the work before us, the obstacle of law in England against cremation has beenremoved, and relatives may resort to the cremation of their dead without any unreasonable impediments.

In saying so much in favour of freedom in regard to cremation, we must, however, in this country confine the freedom to the voice of the living. The wishes of the dead, though they may have been delivered up to the last moment in favour of cremation, and may even have been ordered in the will of the deceased, have no legal weight with the survivors. The writer of this article was called, quite recently, to see a lady who had rather suddenly died,



to determine that life was actually extinct. She had been haunted with the most terrible fears that she might be buried alive, fears much intensified by the existence in her family of a tradition that one of her relatives had actually been subjected to this awful ordeal. She had directed in her will that she was to be cremated, but her legal adviser, who had himself drawn out the document, discovered that it had no force in regard to the direction of cremation, and two of the nearest relatives having a determined and conscientious objection to the process, the body had to be interred. In this instance every precaution was taken that the body was absolutely dead, and even decomposed, before it was laid in the earth, and to this extent the wishes of the deceased were fulfilled; but the fact that the law does not respond to the wishes of the dead is a point to be remembered by all who would The same failure of law seems to be be cremated. operative in Italy, for we all remember that the final request of the great Garibaldi as to the disposal of his body by fire remains to the present moment disregarded.

Dr. Erichsen must at once receive the credit of having written the best book that has issued from the press on the subject of cremation. It is short and yet full, concise and yet complete. There are eight chapters: the first, a history of cremation; the second, the evils of burial, and the sanitary aspects of incineration; the third, cremation in times of war; the fourth, the processes of modern cremation; the fifth, the medico-legal aspect of incineration, and the objections to cremation; the sixth, burial alive, cremation from an æsthetic and religious point of view; the seventh, the present state of the

cremation question.

The introductory letter by Sir Spencer Wells, to which reference has already been made, is an excellent prelude to the chapters above recorded. Sir Spencer Wells has for many years been a staunch and consistent advocate of cremation, and has put it on record that, when the time comes-may it be long delayed !-his body is to be destroyed by fire. He writes, therefore, with authority, as one who has well considered the subject in all its details, and has learned the best and most forcible answers to the many objections that have from time to time been raised against cremation. He quotes the late Dr. Parkes's statement "that neither affection nor religion can be outraged by any manner of disposal of the dead which is done with proper solemnity and respect to the earthly dwellingplaces of our friends. The question should be placed entirely on sanitary grounds. Burying in the earth appears certainly to be the most insanitary plan." On the religious side of the question, Wells also adds a strong sentence from the late Lord Shaftesbury, who remarked to him that, if cremation were wrong, "what has become of the blessed martyrs who were burned at the stake in ancient and modern persecutions?"

We turn naturally, as scientific readers, to the section of Dr. Erichsen's work which treats on the sanitary aspect of the subject. This is not, in our view, the strongest part. In it the author has collated the widely reported instances of the spread of epidemics on the opening of burial-places where persons who died of contagious diseases, similar to maladies which have broken out, have been interred. But here three fallacies are suggested. In the first place, it is impossible to accept all the illus-

trations as illustrations strictly in point and entirely trustworthy-or, for the matter of that, any of the evidence as absolutely trustworthy-seeing that other causes which might have been at work to produce the effects named are not duly eliminated. In the second place, if the instances cited may be accepted as prima facie evidence, they accord imperfectly with other instances, not of exceptional, but of every-day life, in which cemeteries and graveyards holding the remains of those who have died of contagious maladies have been partly or largely opened without any manifestation of the dangers referred to; or in which persons have lived for long series of years in close proximity to graveyards and cemeteries receiving the dead from infectious diseases, and yet have not suffered from those diseases more than others in other localities. There is at the present moment a cemetery near London, from which at times, emanations of the worst kind proceed, indicating that the cemetery is overcharged with dead, and ought at once to be closed; but no epidemic has broken out from it as a centre of contagion. In the third place, the evidence collected by the author, if it were accepted as mainly trustworthy, is not quite ad rem. It would be correct in so far as old burial-grounds and old modes of burial are concerned, but it would have no bearing whatever on the earth-to-earth system of burial which our countryman, Mr. Seymour Haden, has done so much to introduce and to perfect.

Dr. Erichsen's answer to these objections would be: Why linger at all over the bodies of the dead? they feel not, neither do they know. "It is of no consequence to the dead whether they rot in earth and originate miasmata, or are transformed by fire into pure white ashes. They feel as little of the process of decay as they do of the flame: their eye is surrounded by the same darkness, whether down in the deep grave or in the glowing light of the crematory furnace. But it is of greatest consequence to us, the living; and the only way to protect ourselves from poisonous infection by our dead is to burn them."

In this one sentence lies, in a scientific sense, the gist of the whole question. If it were true and demonstrable that the only way by which the living can be preserved from the dead is to burn the dead, every true man of science would support the principle of cremation out and out, and the practice would become universal in a very Moreover, as Science, like Nature short space of time. herself, has no morbid sentiments, but goes straight to and for the truth, she would not tarry long in making herself heard. It is just because the voice of Science cannot be so absolute that it demurs or hesitates. Her scholars inquire amongst the living of the day to see if they afford an answer to the important question. They ask: Are the persons whose duty it is to be nearest to the dead immediately after death-the upholsterers and the servants of the cemeteries and graveyards-more liable than others to the infectious diseases from their special occupations? and the answer which comes back is certainly negative. They ask other and similar questions:-How many times has it been known that a medical man in conducting the autopsy of a person who has died of a contagious affection has contracted the disease? How many women of the death-chamber have contracted disease from the dead? These questions also





Tames Toseph Sylvester

. Engraved by G. F. Siedart: from a Photograph by Mass J. Gilliard & C. Oxford:

London Published by Macmillan & C.





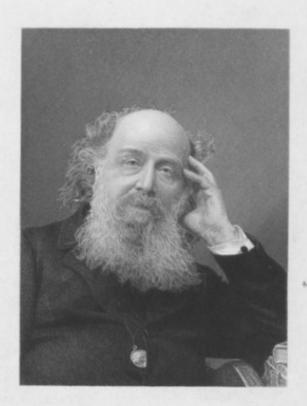
Tames Toseph Sylvester

Engraved by G. S. Godart, from a Photograph by Mass & Salliard & C. Oxford

Linday Dabbardad by Marmillan & C.

Alitana January 775 3600





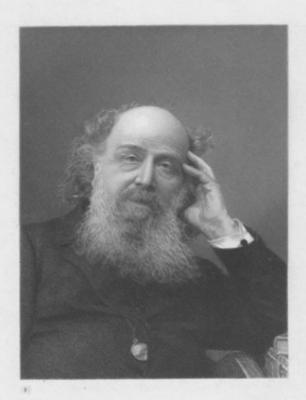
· James Toseph Sylvester.

Engraved by G. I. Stodart: from a Photograph by Mar " I Stelliard & G. Caford

London Published by Macmittan & C.

Million January 197 2000





Tames Toseph Sylvester

Engraved by G. I. Stidart: from a Photograph by Mess " I Gilbard & C. Oxford:

Contin Deblecked by Marmillands C.

Sylvester Francis Galta With the authorbest regard Sonnet. On a Lady coming up to and addressing the writer by name, when sitting alone, in a state of mental abstraction. As Adam felt, when waked from leaden trance And radiant shadows of his drowsy mood, With drooping head and half-averted glance Like Venus risen naked from the flood, The paragon of perfect womanhood. Unblotted page of virgin-life's romance, His dream's embodiment before him stood, And smote his heart with pleasing sufferance-So feeling when, as soft as zephyr's sigh Waking to life weird chords of harmony One breathed my name and dawned upon my sight-Like foolish bird who hears the fowler's cry, Nor heeds remembered sweet captivity, My soul struck earth, from Heaven's infatuate height. and deep enchralment of his drowsy mood

Retraspect.

On receiving a coldly-worded letter

ERE told its message, spent The warning flash at sea, Stars through dim firmament Making mad revelry,

Earth's quickening sovereign eye Behind night's veil withdrawn, With sobering alchemy In pale day quenched the dawn,

Eve's fiery armament Furrowing the crimson sky, Like glow by passion lent, Like passion's dream, to die

Life's bootless endless chain, Things born to cease to be, Delights that fade to pain, Dead leaves of memory

Verses Composed

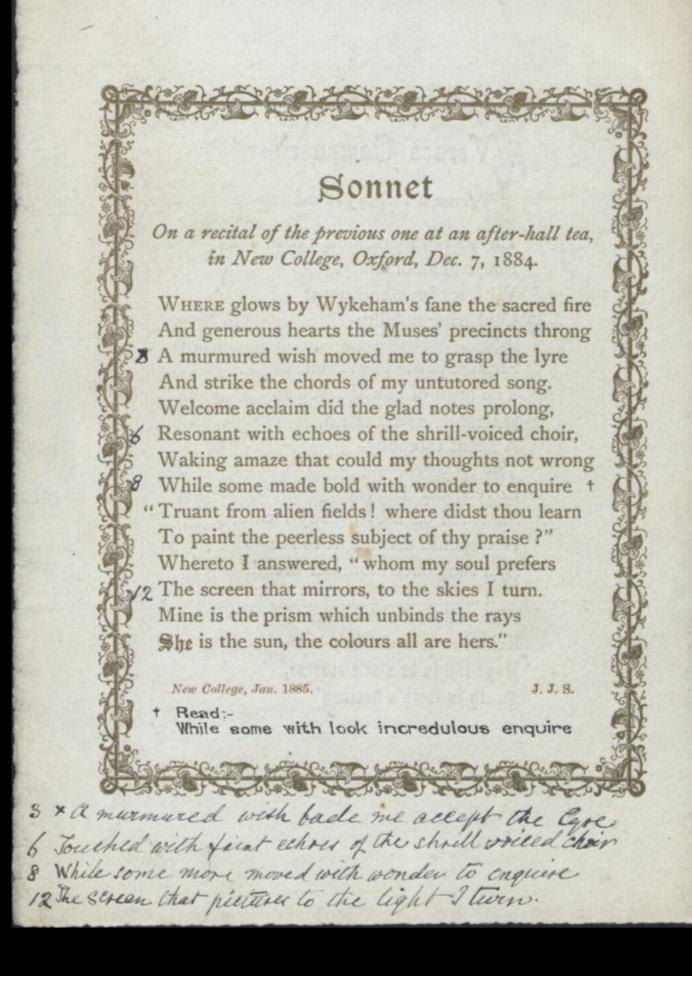
from a valued friend.

Envy's fell tooth, time's rust, Snapt links of amity, With icy breath, distrust Cankering nobility—

Strange pause in merriment,
The hush of minstrelsy,
So sweet, so transient,
A silent threnody—

Loved lost Eurydice
Snatched back by greedy Death,
Her spouse distraught to see
And suck once more her breath—

What tales of eld rehearse, Echo in mournful key— Dope lights to swift reverse, Death is faith's destiny





UNIVERSITY COLLEGE, LONDON.

NEWMARCH LEGTURES.

SYLLABOS OF LECTURES

ON THE USES AND METHODS OF STATISTICS.

TO BE DELIVERED BY

Professor F. Y. EDGEWORTH, M.A., D.C.L.,
On Wednesday, May 11th, and the five following Wednesdays, at 5 p.m.,
in University College.

ADMISSION FREE.

I.-First Principles.

The extent of the subject here treated is that which is denoted by two leading definitions of statistics, viz: the study of numerical statements relating to society, and the theory of means. The subject may be divided according as the element of induction is less or more prevalent. First come general directions as to the acquisition of data; e.g., that figures should be accurate, and terms unambiguous. Examples of the violation of these rules; together with other precepts and cautions. Use of relative figures (per head, per cent, &c.) Analysis of the data.

References: Conférences sur la Statistique (Roxier Editeur), 1891: Pidgin, Practical Statistics, 1888; Giffen International Statistical Comparisons, Economic Journal, June, 1892.

II.-Graphical Methods.

The Cartesian system of co-ordinates. Integration and interpolation. Case where several dependent variables (i.e. diseases from different causes) are referred to one independent variable (i.e. the time). The case of one variable dependent on two independent variables is properly represented by a surface; but curves of level and variously coloured planes are more convenient. Methods of expressing variation of a quantity relative to its initial, or average, value. Miscellaneous devices for exhibiting numerical relations to the eye.

References Marcy, La Mithode Graphique, 1885; Favaro, Leçons de Statique Graphique (translated into Feench by Terrier), ch. v. with appendix by the translator. Levasseur, La Statistopse Graphique, Journal of the Statistical Society, Jubilee vol., 1865; Marshall The Graphic Method of Statistics, Ibid: Cheysson, Les Carlogrammes à leistes gradules, Journal de la Societe de Statistique de Paris, 1887; Scribner's Statistical Atlas of the United States; Longstaff, Stadies in Statistics, 1891.

III.-The Doctrine of Averages.

The general idea of a mean comprehends innumerable species, of which the most important are, the Arithmetic Mean, the Median, the Greatest Ordinate (or centre of greatest condensation) and the Geometric Mean. A cross division is between simple and weighted means. Concrete instances of these varieties. Subtle distinction between so-called objective and subjective means. Peculiar prestige attaches to the means of which the constituents are grouped according to the Probability Curve, or law of error. A priori demonstration, and empirical verification, that this form arises under certain conditions.

References: Veun, Lagic of Chance, Third Edition, 1888, chap. xviii., and xix.; Veun, On . . . durages, Journal of the Statistical Society, 1891; Galton, Statistics by inter-comparison, Philosophical Magazine, 1875; Bertillon, Moyense, Dictionnaire Encyclopédique des Science Médicales; Edgeworth, On the choice of Means, Phil. Mag., 1887, On the empirical proof of the law of error, Ib., 1887.

IV .- Types and Correlations.

The 'mean man' has for stature, length of cubit, height of knee, &c., the respective means of the statures, lengths, &c., of a great number of men. Reply to the objection that such a combination of partial means may not form a possible whole. Relation between the deviation of one organ or attribute, e.g. stature, from its mean value, and the "correlated" deviation of another attribute, e.g. length of cubit, from its mean; as established by Mr. Galton, and illustrated by Mr. H. Dickson. Abridged method of ascertaining the co-efficient which expresses the correlation. Extension of the Galton-Dickson method to the correlation between three attributes, e.g. stature, length of cubit and height of knee. The formula for the most probable value of one attribute, e.g. stature, corresponding to assigned values of two other attributes, e.g. length of cubit and height of knee, may be ascertained either from the three simple correlations, between stature and cubit, stature and height of knee, cubit and height of knee; or by observations special to the case of three variables. Correlation between any number of attributes.

References: Queletet, Anthropomérie; Galton, Family Liheness in Stature, Proceedings of the Royal Society, 1886; Co-relations and their measurements. Ibid. 1888; Weldon, Gorrelated Variations, Ibid. 1892.

V.—The Statistical Part of Inductive Logic.

Passing Insurance and other direct applications of statistics, we come to the investigation of causes. The inductive method to which statistics lends itself, the Method of Agreement, is liable to the fallacy Post hos propter hoc; of which numerous examples



occur. The Method of Concomitant variations is facilitated by the use of parallel curves. The Method of Residues is exemplified when in comparing the death rates of different classes, we make allowance for their different ages; and in similar cases.

References: Mill, Logic; Giffen, Essays on Finance, and Article in June No. of Economic Journal; Humphreys, Value of death rates as a test of Sanitary conditions, Journal of the Statistical Society, 1874, Class Mortality Statistics, Ibid. 1887.

VI.-The Elimination of Chance.

One case of the Method of Residues, for which there exists a technical apparatus, is where the agency allowed for consists of those "fleeting causes" called chance. The simple method of eliminating chance, described by Mill (Logic, iii, xvii, 4), and the higher method derived from the theory of error. The latter method is particularly applicable where the deviation from the average value of a ratio—e.g. that between male and female births—follows the analogy of the simpler games of chance. In other cases the higher theory affords rather regulative ideas than exact conclusions; in this respect, comparable to the use of the mathematical theory of economics.

References: Westergaard, Grundzüge der Theorie der Statistik, 1891; Duesing, Daz geschlechtverhaltniss in Franzen, 1890; Edgeworth, Methods of Statistics, Journal of the Statistical Society, Jubilee vol., 1885.

J. M. HORSBURGH, M.A.,

Secretary.

Trulys of But low of Lower

Mr. Merrifield exhibited some further results of temperature experiments on pupe of Pieris daplidice from eggs obtained at Hyères in March. Four were forced at 70° to 80° F., emerging in seventeen to eighteen days; all were of the ordinary summer type. Seven others cooled at about 52° F. for from five to six weeks, and then at normal outdoor temperature, where they were from five to eight weeks before emerging, were all of the spring form bellidice. A Colias eduss pupa cooled for four weeks had the ordinary markings ill-defined and the black discal spot much reduced. Of two Melitaa didyma forced at 94° F, and emerging in five to six days, one a male, was abnormally fiery in colour, and two that were cooled at about 51° F. for four weeks, had a great extension of the black markings on the undersides of the hindwings. Some Saturnia carpini, from North Italy, forced in the late winter and early spring were much paler, ruddier, and less richly marked than those kept out of doors. A number of fresh pupe and larvæ of Vanessa sertica, var. polaris, from Lapland, kindly brought by Dr. Chapman and Mr. W. E. Nicholson, were subjected to the usual different temperatures, from about 102° F. to 34° F., and exhibited a wide range of effects, but not so wide as those from Central Europe. S. carpini is interesting as one of the few winter pupse which have been found to be affected. The others previously recorded by him were Drepana falcataria, the three Scienias found in England, and Zonosoma punctaria. Mr. Merrifield had not found time to work out all his results, but he thought the changes produced by temperature were mainly of three kinds, viz.: (1) General change, often striking, in the colouring, without material alteration in the pattern or form of the markings, but often with much enhancement or diminution in their intensity; (2) change caused by the substitution of scales of a different colour, either singly and generally distributed so as to be scattered, or so grouped as to cause a material change in pattern; (3) change in general appearance, caused by imperfection in the development of scales or of their pigment. No. 1 seemed a direct effect of temperature not affecting vigorous development. Under No. 2 were to be ranged the most radical changes in pattern (as in the extreme case of Araschnia lecana-prorsa, which had been explained on the theory of reversion to an earlier form). In No. 3 the wings were often somewhat reduced in size, the scales were scanty, i regularly placed, and often misshapen and deficient in pigment, the membrane of the wing showing between them, so as to give the insect a shining "greasy" appearance. Of course the three were more or less combined in many cases-Also he thought that in general the principal changes were produced along the margins and at the base and spex, and often along the nervures of the wings; perhaps there was some connexion between this and the fact ascertained and lately published by Mr. Mayer, that these were the parts of the wings in which the pigment was the last to develop. In conclusion, he called attention to the experiments of Mr. E. Fischer, of Zürich, and particularly to the considerable effect caused by brief exposure to a very low temperature, one gradually reduced from about 20° C. (68° F.) to 2° C. (28.4 F.), where pape of V. urtica were kept for brief periods, causing more than half of the butterflies from them to be materially changed in appearance.



Pedigree of the Meldola Family.



A Hebrew book, giving the Pedigree of the Family of Meldola from the year 1340. It stops at Abraham Meldola, who died in 1720. The second leaf, with the continuation, is missing, but the names are added in this translation, The book, which is much mutilated, contains above 400 verses, written by a member of the family, describing the life of the Rev. Raphael Meldola, Haham of the Portuguese Congregation in London. It also contains poems, congratulatory verses, &c., composed on various occasions.

"This genealogical tree of our family, which I found in MSS., was composed by my honoured father, with additions by myself of those members of the family who are now alive and known to me; besides the children of Abraham, Samuel, Raphael, Elyashib, the four sons of the Rabbi David Meldola, Rabbi of Amsterdam, about which children I know nothing. I have arranged the names as I found them."

- The accomplished Haham and Distinguished Dayan, Cabbalist and Theologian, the Pious, humble and venerable Rabbi Isaram Meldola, one of the Sages of Castile, who at the time of the expulsion went to Mantua, became Preacher and Teacher of the Torah, and was head of the College. Died in the year A.M. 5100 (= A.E.C. 1340).
- His son, the accomplished Habam and Distinguished Dayan, Teacher of the Torah in Israel, Rabbi Samuel Meldola. He preached in Mantua, and was head of the College. Died A.M. 5175 (= A.E.C. 1415).
- 3. His son, the accomplished Haham and distinguished Dayan, perfect scholar, eminent physician, Rabbi Isatan Meddola, who wrote a Commentary on Isaiah, called 'The Vision of Isaiah, printed in Mantua. Died A.M. 5285 (— A.E.C. 1475).
- His son, the accomplished Haham, and distinguished Dayan, the eminent Physician Samuel Meldella. He was Physician to the Duke of Mantua, and wrote a work on Medicine. Died A.M. 5290 (= A.E.C. 1530).
- His son, the accomplished Haham and Distinguished Dayan, Teacher of the Torah in Israel, Rabbi Eleazer Meldola, Preacher in Mantua. Died A.M. 5885 (= A.E.C. 1575).
- 6. His son, the accomplished Haham and Distinguished Dayan, Faithful Shepherd and Head of the College, the celebrated Rabbi, Teacher of the Torah in Israel, the Pious, the humble and venerable Rabbi David Israel Meldola, of Holy Memory. He fied from Mantua (A.M. 5382 = A.E.C. 1621) on account of the war, famine and pestilence, and went to Florence, where he became Rabbi and Head of the College. He wrote a commentary on Scriptural Passages, and a work on the Jewish Faith. Died A.M. 5411 (= A.E.C. 1651). He left two sons.
 - The Elder—the wise and intelligent Haham Eleazer Meldola. In the year A.M. 5444 (= A.E.C. 1683) was invited to Leghorn with his brother Abraham, where he (Eleazer) became a teacher in the Talmud Torah College. Died A.M. 5465 (= A.E.C. 1704).
 - The Younger—the wise and intelligent, the pious and humble Rabbi Abraham Meldola.

 He was Reader of the Congregation in Leghorn. Died A.M. 5481 (= A.E.C. 1720).

 He left two sons.
- 8. Moses Meldola [Professor in the University of Paris].
- 9. RAPHAEL MELDOLA, Rabbi in London [Born in 1754 at Leghorn; died in London, 1828].
- DAVID MELDOLA, Rabbi in London [Born in 1797 at Leghorn; died in London, 1853].

 10. His youngest brother was
- Samuel Meldola [Born in London, 1815; died in 1881].
- 11. Son of Samuel Meldola, Professor Raphael Meldola.



Essays at Odd Times 15 181

ABRAHAM LINCOLN.

Just, unperturbed, magnanimous,
Tried in the lowest seat of all,
Tried in the chief seat of the house,—

Lincoln! when men would name a man
Who wrought the great work of his age,
Who fought and fought the noblest fight,
And marshalled it from stage to stage,

Victorious, out of dulk and dark,
And into dawn and on till day,
Most humble when the pæans rang,
Least rigid when the enemy lay

Prostrated for his feet to tread,—
This name of Lincoln will they name,
A name revered, a name of scorn,
Of scorn to sundry, not to Fame.

Lincoln, the man who freed the slave; Lincoln, whom never self enticed; Slain Lincoln, worthy found to die A soldier of his captain Christ. GALTON TO PAPERS ON PAPERS



ESSAYS AT ODD TIMES.

VII. OF SUCCESS IN LIFE.

ONE of the minor vices of the age seems to be a tendency amongst us to the undue exaltation of the successful. That this should be the case in an age of keen competition between man and man, in that struggle for existence which obtains amongst men as it does, teste Mr. Darwin, amongst plants, is scarcely to be wondered at; but it must be allowed that it has its inconveniences, both from an ethical and a social point of view. This tendency crops up here and there upon the surface of our literature like an unwholesome stratum upon the surface of our earth. The historian indeed makes the characters of his drama revolve around a few successful heroesheroes too often simply by virtue of their success. But the historian excuses himself upon the plea that he has to record the great deeds done in the world, and not the great "might-have-beens." The fictionist has less excuse, whilst he too offends after this sort. In nothing indeed is the distinction more clearly marked between the old and the new than in the literature of fiction. The classical dramatist shows us his hero as ever waging an unsuccessful warfare with calamity-wave upon wave, the billows of misfortune rolling over his soul till they engulph him-whilst the hero of our modern drama is nothing if not successful. It was only the other day that a play, which up to that point had been favourably received, was hissed off the stage, because the hero failed in all his efforts, and got himself killed in

the last act. The author altered the end of his story, and the play became a great success. And, if we fall back upon biography, the case is the same, or worse. Take up any recent book of biography, especially if it is intended for young people and written with what is called a serious aim; and, even if it does not go so far as to teach the readers "How to make the best of both worlds," yet the chances are that it is headed "Boys who have risen in life," or "Self-made Men"—that it is in fact a short cut on the road "to be healthy, wealthy, and" -successful. And yet we must not be too hard upon this tendency of the age we live in. To most men success in life is simply a means to an end, and to an end which in itself is good. It is not merely a selfish ambition, or the hope of gratifying the baser part of his nature, which generally spurs a man on in the race, and bids him "spurn delights, and live laborious days.'

Many professional men, it must be remembered, marry early in life-almost as soon as they have entered upon a professional career; and success in that career means that a man's wife shall enjoy the comforts she has been used to, and that his children shall receive as good an education as their father had. And, even if the motive for exertion be a more selfish one, it is not generally selfishness of the baser kind-merely a desire for better wines, more horses, a bigger house which urges a man on. But success in life means to an educated man the ability to travel,-it means pictures, books, intercourse with clever and intellectual people; in a word, the indulgence of intellectual tastes and pursuits which an advanced civilization begets and fosters, and which can only be gratified by those who are born rich, or who get money by professional success. The love of money may be the root of all evil, but it has been the root of a good deal of tangible good in the world too. It has done something to conquer space and time; it has bridged wide rivers, and connected continents with telegraphic wires. It has alleviated disease, and lengthened life. It has cultivated home feelings in

the penny post. It has amused and instructed countless thousands by means of a well-paid literature. These things would probably never have been done, or would have been done badly, but for the desire of getting on in life. Want, like steam, is a very useful expansive power when you can give it a safetyvalve in success. Still the undue exaltation of the successful has a tendency to vulgarize ambition in the minds of young people, to give them a low aim, and to make life too much a matter of harter and traffic. And, for my part, I should like to see a few biographies of unsuccessful men-of men whose lives, after a worldly sense, have been failures. I am not sure but that we should have a finer individuality in such men. For, after all, great men have been great not by virtue of their success, but in spite of it. And success has been too often an acid which has eaten off the thin electro-plate of gilt that overlay a substratum of baser metal.

It has been said indeed, and upon good authority too, that the world knows nothing of its greatest men. This of course in a sense may be true. But the world is no fool. It knows perfectly well what it wants, and is always ready to reward those who can produce what it wants. It may not want that which is best and greatest in a man, but only the best of that which he can give to serve its uses. And we may depend upon it that the men who have succeeded in the world are the men who, from a worldly point of view, have deserved to succeed. We sometimes hear the remark made by foolish people of some person who is their friend, that so-and-so might have been anything he had chosen; if he is a barrister, he might have been Lord Chancellor; if a clergyman, the Archbishop of Canterbury. They forget to take into account the fact that their friend may want just that power of concentrating his faculties, the power of work, which is nine-tenths of genius. For the most part I hold that a man is only equal to what he has done. The measure of a man's success is generally the measure of his powers.

It is instructive to notice in some of our modern biographies, how the writer (of the bat-biographer species) sums up the various causes which have contributed to make his hero a successful man, heaven and earth apparently combining for the purpose; whilst he generally neglects to take into account the hindrances in spite of which the man whose life he pretends to write became great and famous. If we could get hold of these-the hindrances pushed aside, and the obstacles surmountedmost biographies would be much more instructive reading than they now are. " Best men, they say, are moulded out of faults," and the greatest men, I am sure, have been moulded out of difficulties.

But, suppose we touch upon one or two of the hindrances to success in a professional career, which young men are likely to meet with when they first start upon the race of life. And it must be remembered that a man's foes are generally they of his own household—the eidols of the market-place, as Bacon phrased it, those home influences which surround him in early life; and the eidols of the den, those which lie wholly within himself. And first, of shyness; though I doubt whether the shyness which sometimes shows itself in young people is to be looked upon as an unfavourable symptom. I believe that very much of the world's work has been done by shy men. It may seem at the outset to be a hindrance to success, but it is generally accompanied by qualities which are essential to success, and the reaction against it may give just that stimulus which the mind needs to brace it for success. Listen to Archbishop Whately. " suffered," he says, "all the extreme " agonies of shyness for many years, and, " if the efforts to which I was continu-"ally stimulated (to think about his gaucherie, copy other people's manners, &c.) had been applauded as such, I " should probably have gone on to affec-" tation; but, finding no encouragement, " I was fortunately driven to despair. I "then said to myself, Why should I " endure this torture all my life to no "purpose ? From this time I

" struggled as vigorously to harden my-"self against censure as I ever had to "avoid it." In fact, in the reaction against shyness, his mind stiffened into self-reliance. Through weakness he was made strong. There is no better friend, no friend more staunch and true, than the one you make out of a foe. And shyness, like all other hindrances, if conquered betimes, may be converted into an element of strength. Demosthenes was a stammerer; I have no doubt he was also naturally a shy man. And one of the best public speakers I know tells me that, as a young man at college, he made such a fool of himself at a debating society, simply through nervousness, that he broke down in his opening sentence, amid peals of laughter, and rushed away to his rooms to hide his shame and his shyness, like Mr. Winkle after that memorable trial in which he so distinguished himself in the witness-box. Shyness, in fact, is like the tension of the harp-string, which renders it liable to break, but also makes it musical. It is the mind's selfconsciousness. Some one has said that all clever men are conceited. And I believe that all clever men are naturally shy. Nor are the two qualities opposed to one another, as a careless reader might fancy. Three parts of shyness are made up of conceit. For this reason shyness generally wears off with advancing age, or rather is rubbed off through contact with the world. Most men find, as they grow older and wiser, and enlarge their mental horizon, that they are not so clever as they thought, or at any rate that there are a hundred others as clever, or cleverer than themselves. And with their conceit they lose their shyness.

Another hindrance to success in a professional career is what I will beg to call a want of breadth. The word breadth is of course borrowed from the painters' vocabulary, and signifies that combination of many parts into a whole, which gives unity to a subject,—the "one in many," without which there can be no perfection in art or life. It is in this quality of breadth that the begin-

ner's picture generally fails. The parts may be good enough in themselves, the incidents may be well contrived, but yet the picture—as a whole—is naught. Every master knows that he has generally to strike out of his pupil's picture a multiplicity of petty details which only mar its effect. And the want of breadth is equally fatal to success in life. "Concentrate your powers" must be the young man's motto. Professional success is impatient of a divided allegiance. Lawyers, I believe, look very shyly upon the barrister who has written a poem; and the lawyers are right. Admirable Crichtons may be all very well in their way; but if you, my reader, have a liver complaint (which heaven forbid!) you will do well to consult a doctor who has made hepatic complaints his speciality. I was talking only the other day to a sage man of much experience in the world, a clubbist who has been conversant with many cities and men, about a friend of ours, a young man, whom his father expects to do wonders in his profession. "He will never get "cn in life," said Ulysses in a summary and judicial tone; "he is clever at too "many things."

Another hindrance to success in a professional career is what is commonly called the want of a connexion. And this does seem in fact to be wholly beyond and outside of a man's own self, and to be irremediable by any efforts of his own. The young barrister who has no friends or relations among the clique of solicitors, the artist who has no interest in the Art world, the writer who dwells outside of that magic circle, as he deems it, wherein authors live and move and have their being: these men, it may be thought, are almost shut out from success, and have but a poor chance of getting on in the callings they have chosen. Give me but an opening, muses the young man of talent, and the world shall see what I can do. But herein, I take it, lies the difference between genius and dilettantism. The man of genius is he who makes a way if he cannot find one, who is content to bide his time, preparing himself the while for the

opening which is sure to present itself soon or late. A young, a very young musician sought the advice of a master in his art, who listened, as he thought, very coldly to his aspirations and complaints. "You think I am too young," said the pupil, "Why, you began your "career when you were younger than I." "Yes," was the reply, "but I asked nothing about it." Of course there is a good deal in what mortals call chance. If biography teaches anything, it teaches this: that there has been a golden moment in the lives of most men, which genius has been enabled to seize and to employ; that there is a tide in the affairs of men, which taken at the flood leads on to fortune. The sculptor Thorwaldsen has packed up his few belongings, and is about to leave Rome for Denmark. His life looks blank enough to him. His profession seems to be a great mistake. Nobody will buy his statues, or encourage the genius which he had fondly hoped was in him. But that very day an Englishman chanced to enter his studio, had the ability to recognise his talent, and the money to purchase his great statue, the Jason. The time and the man had come, and Thorwaldsen's fortune was made. And that golden opportunity will come to you also, my young friend. Only take care that you are ready for it when it does come. The stone that is fit for the wall does not lie long in the ditch.

And, after all, it must be remembered that success is but a relative term. When any man accomplishes that which he proposed to himself on setting out upon the journey of life, that man we call successful. A barrister, for instance, proposes to himself that some day or other he will be Lord Chancellor—now, if he stops short at a Puisne judgeship, are we to call his life a failure or a success? He has not, at any rate, reached the summit he meant to reach, and possibly may be therefore a discontented man. Whereas the boy who began life by sweeping out the lawyer's office, and ends by getting a desk there, may be the more successful man of the two. He aimed at being his master's clerk, and he has got what he aimed at.

It may be a question, too, whether there is not more happiness in the struggle to achieve distinction, to gain a prominent place in the eye of the world, than in the success which some-times crowns it. Youth and health, ah me! what possibilities of enjoyment are contained in those two words only! and these the struggling genius usually has, who laments his fate, and deems that happiness is only another name for success. But the old and the successful tell us a different tale. For success mostly comes to a man late in life, after much toil, after many bitter disappointments, after he has served a long and weary apprenticeship to failure. Like a tardy patron, it often comes to him too late-when he is old, and cannot enjoy it; when he is alone, and cannot impart it; when, in a word, he does not much care about it. It is not to him what it would have been twenty years before. He has reached his position gradually, and by degrees has got accustomed to it. It is not the wonderful thing it seemed to his young and eager eyes.

He is an old grey-haired man now, to whom earthly distinction and glory have possibly lost much of their zest and flavour. He has been, perhaps, a little soured by long waiting, a little saddened and tired by the weary strife. His wife-she who shared the struggle so bravely with him, bearing more than half the burden and heat of the day, cheering him on to exertion in those dark hours when his heart gave way, and he almost himself disbelieved in a genius which none but she would recognise-his wife is gone from his side, maybe, and cannot share the reward as she had shared the labour. His children are scattered, perhaps, in the four quarters of the globe. He accepts his position, indeed, and is thankful for it. But he owns to himself sadly in many a solitary hour-made more solitary by his having reached a pinnacle on which but few can stand beside him-that there are better things for a man even in this world than success

LINCOLNIANA.

BY EDWARD DICEY.

I HAVE often wondered, of late, how the general chorus of praise, which has been raised above Abraham Lincoln's tomb throughout the length and breadth of England, would have impressed me, supposing that I had been an American of the Northern States. It is ill grace to look a gift horse in the mouth, and our kinsmen across the Atlantic are too happy in this, the moment of their triumph - the closing period of their long and gallant contest-too kindly, also, in their disposition, to take our tardy recognition of the dead President's merits in any other sense than that in which it is given, namely, as a heartfelt expression of genuine feeling. Still, I cannot but think that many of them must doubt whether our sympathy would have

been as loud if Lincoln had fallen in the days when the fortunes of the Union were thought to be on the wane. I can fancy men in the New England States -men to whom England was formerly a second country, and who felt the animosity displayed towards their cause amongst us as a bitter personal sorrow -saying, in their hearts, if not by their mouths, "We are grateful for your good will, but we wish it could have been shown usearlier. One kindly word spoken three years ago would have been better than an oration delivered now. At the time when our cause seemed the darkest, when every act of our Government was systematically misrepresented, when every victory was decried as worthless, when every discouragement was thrown

in our path, then we should have valued even more keenly than we do now your public recognition of the heroic qualities you have at last discovered in the man who has been from the beginning the representative of our struggle. 'Bis dat, qui cito dat,' says the Latin proverb; and you have been somewhat

long in giving."

If such a response were made-I do not believe that it will be made-to our national expression of condolence for Lincoln's death, I do not think that any honest Englishman would feel the retort altogether undeserved. But from this retort I hold that I may fairly exempt myself. Having belonged from the beginning to that "small knot of fanatics and sciolists" whom the Times declared, not so many months ago, to be the only persons who believed in the possibility of the Union ever being restored. Having expressed that belief in the pages of Macmillan, in days when the faith was an unpopular one, boasting but few disciples-I have some right now to express my opinion with respect to Abraham Lincoln, without being liable to the suspicion that I am doing honour not to the man but his success. Moreover, it was my fortune, during my stay in Washington three years ago, to see something of the late President, and to hear his character and doings constantly discussed by those who were in daily communication with him. Let me try and recall the result of the impression thus left upon my

In the spring, then, of 1862, Abraham Lincoln was certainly not popular with Washington society. Chance letters of introduction made me closely acquainted with two branches of the motley gathering which filled the capital of the United States during the first year of the war. I knew many of the Abolitionists, or Black Republicans, the men who were the vehement supporters of that policy, which at a later period was adopted by the Government. But at that time the great bulk of the nation could not realize the fact that the Southern States were really prepared to dissolve

the Union; and the public mind refused to adopt any decided view with reference to slavery, for fear the adoption of such a view might stand in the way of the ardently-desired reconciliation with the South. General McClellan was the typical representative of this state of public feeling, and the months preceding the departure of the grand army of the Potomac for the Peninsula was the epoch of McClellan's triumph. this period, the belief in the "Young Napoleon's" ability as a commander, was almost universal, and what opposition there was to him was based on political, not on military grounds. The Abolitionists conceived that he would be enabled after one or two successful battles to patch up a peace by concessions to the slaveowning interest; and but few of them were sanguine as to any decisive blow being dealt against slavery. I remember a leading Republican senator saying to me at the time, "My only hope of " seeing slavery abolished is my belief "that the military power of the Con-" federacy is underrated. The prolonga-"tion of the war is the one chance for " the triumph of our cause." Now, at this time, McClellan had no firmer supporter than the President. Personally there was little liking between Mr. Lincoln and the then Commander-in-Chief. But the President had convinced himself that McClellan was the right man for the war; and his first duty in his own eyes was to restore the authority of the Union. At this time, therefore, the Abolitionists were in opposition to the President. Deputations of the leading Republicans were constantly waiting on him to impress upon him the necessity of adopting more decided action with reference to slavery; but their representations met with no success. I used to hear frequently of the results of these audiences; and the men, who took part in them, expressed to me opinions about the President which I daresay now they would recall with wonder. To do them justice, they never doubted the sincerity of Abraham Lincoln's personal sympathy. In fact, the President went out of his way on

many occasions at this time to show his own feelings with reference to the peculiar institution. Amongst many illustrations of this, I can recall a story I heard from one of the deputation to whom it was addressed. A number of railway managers called at the White House in reference to some traffic arrangements. The President heard their statements, and then remarked, "I suppose you don't know, gentlemen, "that I was once one of your body " myself. But mine was a very pecu-" liar line of railroad, for the trains all "ran underground, and the passengers " always went from South to North, " never from North to South." Even so late as 1862, it required no considerable disregard for popular feeling for a President to acknowledge that he had thus been connected with the organization by which fugitive slaves were passed across the frontier. In the same way, none but a statesman who had resolved to leave no room for doubt as to his anti-slavery views, would have attended Mr. Wendell Phillips's lectures at the Smithsonian Institute, or would have dared to outrage every American precedent by receiving coloured men at the White House. But throughout this period Mr. Lincoln drew a distinct line between his personal and his public duty. " As a man,"—this was the invariable purport of his replies to Abolitionists,-" I agree with your views; as a President " I have no right to interfere with the " institutions of the country, except in as " far as I find it necessary to support the "authority of the Government." Abolitionists, while they acknowledged the force of this argument, complained bitterly of the narrowness of mind which in their opinion incapacitated Mr. Lincoln from seeing that there existed a higher duty than mere observance of the letter of the law. In their judgment the conduct of the Secessionists had rescinded the compact entered into between the Slave States and the Union; and the timidity of the President was thus letting slip an opportunity, which would never return, for the overthrow of an accursed system.

"He is a good man, but not strong enough for the position." This is the verdict I have heard passed scores of times by men who learnt afterwards to

modify their opinion.

The other section of society to which I have alluded, and with whom chance made me very intimate, was that of the old residents at Washington. With the election of Lincoln and the outbreak of secession, a social revolution had been inaugurated at Washington. The great bulk of the residents had been persons of Southern sympathies, and had thrown in their fortunes with the Confederacy. Those who remained faithful to the old flag had no especial love for the dominant section. Their traditions united them to the old democratic party; and they regarded the incursion of new men, which accompanied Mr. Lincoln's inauguration, with something of the same feelings as Whig county members may probably have regarded the new class of public men whom the Reform Bill brought into parliamentary circles. They approved, though not very cordially, of the cause which the free-soil party represented; but they had scant liking for the men whom the triumph of that cause had brought into power. Living as I did very much in this society, I heard pretty well everything that could be said against Mr. Lincoln by those whose dislike was not based on political grounds. That "all" amounted to very The persons of whom I speak recognised fully the honesty of the President, and I think did more justice to his greatness of character than his political supporters. But, if I must speak the truth, they were more or less ashamed of him as the representative of the nation. The man's character stands now so high, so above reproach, that nothing written can in any way depreciate it. And, even if any of my friends in Washington recollect now how sore they felt at times about the eccentricities of the President, they have little cause to be ashamed of their susceptibility. Englishmen have very little notion how much of a certain sort of state and etiquette there was upheld at Washington during the pre-

Secession administrations, or how complete a change was introduced in this respect by Mr. Lincoln. Taylor, and Fillmore, and Pierce, and Buchanan, with all their faults, were men of education and breeding. In the diplomatic circles of Washington they were on a level, in these respects, with the society in which they moved. Now Lincoln was not a vulgar man. No man who is perfectly simple, and unaffected, and yet bold enough to make his position felt if the occasion rise for the display of authority, can be vulgar. Moreover, he had a sort of natural courtesy, and kindly good nature, which more than supply the place of artificial good manners. But still he was utterly unlike the men who had occupied the Presidential chair before him, since the days of Andrew Jackson. There is something to me wonderfully touching now about the story how, at the first state-dinner he was present at, when the waiter asked him whether he would take claret or hock, he turned round and asked the servant which he would recommend himself. But still, I think any honest person would admit that if, like my informant, he had been an American, he would have felt annoyed at the time at this exhibition of ignorance of the ordinary rules of society on the part of the Chief Magistrate of his country. I recollect once being present with Hawthorne at a bar, where a certain very high functionary of the State was drinking, and telling somewhat broad anecdotes to a mixed audience. "How would you like yourself," Hawthorne whispered to me, with extreme disgust at his tone, "to see the Lord "Chancellor, or the Prince Consort, "liquoring-up at a public bar ?" I owned candidly that I should not feel gratified by the exhibition; and I think still that the Washington residents, who were at first bitterly annoyed by the want of breeding displayed by the President, cannot justly be accused of snobbish vulgarity. If at that time they failed to recognise his true merits, they erred only in common with their fellow-

Then, too, at that period Mr. Lincoln suffered much in the estimation even of men whose opinion was not to be despised, by the character of jesterin-chief to the American people which the press had assigned to him. From all I can learn, the stories which he really told, however quaint they might be as illustrations, were never inappropriate, or unbecoming the occasion. There was about the man a sense of fitness, supplied by the possession of real humour, that told him whether a jest was permissible or not. But the papers daily attributed to him every joke that any buffoon throughout the States could pick out of "Joe Miller;" and many of these jokes, if really made at the times represented, would have betrayed not only want of artificial breeding, but absence of native delicacy. In no country is it so difficult to say what is truth as in America. I remember an English settler in the West telling me a long story about "Old Abe,"as men called him there-whose scene was laid at a court-house, where my informant declared he was present himself. The whole point of the story, which, if true, was not a creditable one, rested on the fact of the President's being an immoderate smoker. At the time I heard it, I could not doubt the truth of the anecdote, but afterwards I happened to learn accidentally, from the President himself, that he had never been in the habit of smoking. Thus Mr. Lincoln bore the discredit of having made a variety of jests which he most certainly could never have made-of being, in fact, a man who never could resist the temptation of making a joke, be the occasion what it might. And Americans, who have a strong sense of dignity according to their own standard, felt deeply annoyed at the sort of merry-andrew reputation which, in the earlier days of his administration, clung to the late President. A friend of mine, who saw the President daily, told me at the time that the humour of Mr. Lincoln was used rather as a screen, than due to any innate love of joking. Probably no man ever became the ruler of a great nation with With the author's regards



HOME CONDITIONS AND EYESIGHT.

By KARL PEARSON, F.R.S.,

PROM THE GALTON EUGENICS LABORATORY, UNIVERSITY OF LONDON.

It may not be without interest, in view of recent criticisms of a memoir by Miss Barrington and myself,* to publish some further determinations of the relation of home conditions to sight.

Before doing so it will be well to point out one or two important considerations which I think have considerable bearing on the manner in which statistics ought to be collected, having regard to the medical inspection of school children, which is now becoming universal.

The first point I would insist upon is that careful distinction must be made between (a) home environment and (b) school environment.

Our paper dealt chiefly with the influence of home environment on both refraction and acuity of vision. Now, as far as I am aware, the only material hitherto available for testing the influence of the actual home conditions on the presence of eye disease, on the goodness or badness of vision, or on shortsightedness, is that provided by the report of the Edinburgh Charity Organization Committee, where we have for the first time the sociological report on the home conditions placed alongside the ophthalmological report on the child's eyes, and accompanied in each case by the age of the child. I do not see how it is possible without such information to draw conclusions as to whether the home conditions do or do not affect sight.

^{*} Eugenics Laboratory Memoirs. V, A First Study of Vision and of the Relative Influence of Heredity and Environment on Sight. Dulau and Co. 1909.

I am quite prepared to be shown that the conditions in Edinburgh are exceptional, but the proof can only be given when the children who are reported on elsewhere are followed up into their homes, and the state of these

is recorded, as in the Edinburgh investigation.

Further, the Edinburgh material was of special value, because there is not the same extraordinary mixture of racial types in that city which is to be found in Glasgow or London. We are told, for example, that Russian Jews have in London a very high percentage of eye defect. Any one who has studied the copious statistics of Randal must be convinced that the degree and extent of myopia is markedly a racial character. Those who have investigated any local class in this country know that in anthropometric characters it is usually significantly differentiated from any other local class. The population of our suburbs is usually more sedentary than the population in the working class districts of the town itself and less mixed.

I know, as a matter of fact, that the cephalic index of school children varies very sensibly from one district of London to a second. On this ground alone it is not possible, without control measurements, to assert that, because the percentage of eye defect varies from Whitechapel to Hampstead, the result is due to home environment. It may be so, but a mere statement of percentages in different districts without (a) age distributions, (b) racial proportions, and (c) percentages of defective parents in each district, will not convince those who desire logical statistical proof before forming any conclusion. It is well known that the defective parents also gravitate to the worst districts, and we may expect the defective children there also. For these reasons the work at Edinburgh was especially valuable. It gave age distribution, it dealt with a racially fairly homogeneous material, and it followed up the children into their homes and told us something, if not all we might desire to know, about their parents. I see no other way in which a real solution could be obtained for London. An individual school or two must have all-not only the defective-children examined, and the eyesight report must be accompanied by a sociological report.

A report such as that of Dr. A. Hugh Thompson on the London school children, in which the numbers at each age of both the normal and the defective children are not given, cannot help the statistician in the least to arrive at definite results. Nor, unless the children are followed into their own homes, is it even possible to say how far bad food, bad air, or parental neglect may account for the presence of any disease. There is always the diathesis as a contributory source, and the fact that all the children in the same family may not be attacked, shows that the

variability within the family also plays its part.

Again my critics will, I hope, pardon me if I say that I am not convinced when I am asked whether this or that

^{*} The Jews, like the Germans, are largely brachycephalic, and the increasing brachycephaly of the town populations is a point not without suggestiveness for changes in eyesight.

"is not a fact." For example, that it is a fact that in the better homes the children are more studious, or that the more respectable parents keep their children at home. Either may be the truth, but what we want are actual numerical measures of the effect of these supposed causes in invalidating the apparently small influence of the environmental as compared with the hereditary factor.

What we want are more data before we conclude that results are paradoxes because of such or such an explanation being "a fact" or "a matter of common experience."

Let us attempt to get any information we can on the problem of whether the better class parents keep their children at home, and so their offspring are more studious and suffer more from myopia.* Now, I know of no statistics which at all touch this point of the studious character of the offspring of better class parents, but I suppose the argument to be that the children are kept more at close work and that this damages their sight. Now, it would be possible to compare the sight of children of the same age who came to school at different ages originally, and thus find out whether those who began to read earlier have markedly worse sight. It would be very desirable to collect statistics de novo on this point. The only material that I know of bearing on the subject is that used by Miss Barrington and myself, and provided by Cohn, who gives the correlation tables of sight and years of school life, and sight and age. We have shown that the relationship is more intimate between sight and age than between sight and years of school life, and that, considering the high correlation of years of school life and years of age, the latter is most probably only a derived result of the former. Now, we have recently reworked Cohn's data and discovered the correlation between the ages at which the child began to read and the degree of myopia at a constant age. The partial correlation co-efficient is:

0.04, if age and length of school life have a correlation of 0.8 0.13, if age and length of school life have a correlation of 0.9.

Now it will be, perhaps, said that the latter is a quite sensible correlation, but compare it with the heredity correlation of 0.40 to 0.60, and we see that environment is quite overmastered by heredity. Furthermore, the correlation is the wrong way, the later the child went to school, the worse at a given age is the myopia. I have little doubt that the correlation in this case is sensibly zero, or the age at starting reading has little influence on the result. Cohn's statistics are, of course, not final, but they are very suggestive, because they have hitherto been supposed to prove the exact reverse of what is really extractable from them.

I now turn to the question of the effect of good or bad home environment on disease of the eye. I will consider

[&]quot;The reader of our memoir will remember that our conclusion was, not that the better homes produced more myopia, but that there was no marked relationship between bad homes and defective sight.

first corneal nebula and illustrate by some of the percentages:

Feature of the Home Estima	ted.		Boy	ys.	Gir	Is.
		(Good.	Bad.	Good.	Bad.
Economic condition			3.6	2.3	3.9	2.2
Overcrowding			2.5	3.3	2.5	3.4
Physical state of parents			3.8	2.5	3.1	2.8
"Moral'state of parents			3.5	2.5	2.5	3.5
Means			3.35	2.65	3.00	3 00

Now it is extraordinarily difficult to lay any stress on results whose differences are of this order. A bad moral state of parents would be interpreted to mean less corneal nebula for the boys and more for the girls, the percentages being just reversed. Good economic conditions in both boys and girls would mean 1.5 per cent. more of the disease, and so would the good physical condition of the parents. In such circumstances what stress can be laid on the 0.8 per cent. difference between crowded and non-crowded homes? The only safe conclusion to be drawn is that in Edinburgh at least there is no marked relationship between corneal nebula and bad home environment. The curious point is that if we take all diseases of the eye and eyelid, we appear to get a slightly more definite, but still a quite negligible relation between disease and home environment. A difficulty is whether to include strabismus or not; the correlations have been worked out by Miss E. M. Elderton, of the Eugenics Laboratory, including and excluding "squint." In each a positive correlation means that there is more eye disease with the worse home condition.

				Во	ys.	Gir	rls.
Feature of the Home	Esti	1.	With Squint.	With- out.	With Squint.	With- out.	
Economic conditions			***	0.10	0.14	-0.03	0.02
Overcrowding		***	***	0.05	0.08	0.04	0.12
Physical state of parents	143	***	***	-0.02	-0.02	-0.10	-0.15
Moral state of parents	***	***		0.04	0 03	-0.01	0.01

Now, it is quite impossible to lay any stress on these results. Six out of the 16 show less disease with worse

This category should a priori be considered the most important one in this matter. It marks essentially neglect of the children. Where the home is practically a brothel or the parents habitual drunkards there can be no proper cleanliness or care of offspring.

home conditions, and if we have positive correlations of 0.10 and 0.14, we have negatives of -0.10 and -0.15. Further, no correlation of this kind lying under about 0.25 can be really considered to have definite importance. How very different they are from the values running from 0.4 to 0.6 found in our memoir for the inheritance factor!

It is worth while putting on record here the quantitative contributions of refraction and diseases of the eye in producing defective vision. The refraction results are taken from our memoir; the disease results have been recently worked out by Miss Elderton.

Correlation of Keenness of Vision with Refraction and with Disease.

		Keenness of Vision and Refraction.	Keenness of Vis	ion and Disease.
		(Contingency.)	Squint Included.	Without Squint.
Boys	-	0.58	0.36	0.21
Girls		0.54	0.50	0.32

It will be seen that, if we exclude strabismus, the diseases of eye and eyelid do not produce half the effect on vision that refraction does.

Now I do not intend to argue for a moment that the Edinburgh data provide the final word in these matters, but they form the first solid attempt to provide information as to the influence of home environment. Neither the school medical officer nor, as a rule, the teacher can follow the children into their homes. All that has hitherto been done has been more or less plausible guesswork as to the relation of home environment to the health and intelligence of the child. I shall not be surprised to find, when further data are available, that the nation has for years been putting its money on "Environment" when "Heredity" wins in a canter. To say this is not to discourage all attempts to better defective sight in the schools or to check the intensification of myopia But it would be foolish-in face of our increasing degeneracy—to neglect the possibility that only other methods can in the long run hinder the spread of defects. Better qualities, such as keen and strong vision, are no longer an absolute requisite for survival, and defectiveness, instead of meeting the stern judgement of Nature, is by governmental and charitable agencies supported to multiply its kind. The curative art in its tenderness for the individual may be disastrous for the race, unless it realizes fully the relative biological importance of heredity and environment.

- Exhibition of four Medico-Legal specimens. ... Dr. HARVEY LITTLE JOHN.
- - Discussion:
 Degeneration: its causes and prevention—with reference to the proposed
 Sterilization of certain Degenerates.
 to be opened by Dr. ROBERT RENTOUL,

The following, among others, will speak —
SIR WM. COLLINS. (President): EARL RUSSELL; SIR JOHN MACDOUGALL;
DR. JAMES SCOTT. (Briston); DR. F. J. SMITH.

VISITORS ARE INVITED TO ATTEND.

The Medico-Legal Society

December 13th., 1904

The proposed Sterilization of Certain Degenerates.



Mental Degeneration.—Physical Deterioration.—Degenerates.—Deteriorates.—Definitions.

- 1.-Is there a large number of Degenerates and Deteriorates in the United Kingdom?
- 2. -Is the number increasing?
- 3.-The financial cost of their upkeep.
- 4.-Are lunacy and other degenerations curable by present methods?
- 5 Proposed Sterilization: Natural, Artificial; Voluntary and Compulsory. History of Who should be sterilized?-The legality of.-Consequences.-Who should operate?-The operation.-

Orchotomy: removal of testes.

Oophorectomy: removal of ovaries.

Vasectomy: Ligature and excision of the Vasa Deferentia (seminal ducts)

Salpingotomy: Ligature and excision of the Fallopian Tubes, (through which the ovum passes from ovary to uterus)

Diagrams and Tables,

(If time permits). Other methods which, if adopted, would narrow the field of Sterilization-

- (a) Check alien immigration of lunatics, criminals, paupers, prostitutes, etc.
- (b) Forbid intermarriage of British with some other races.
- (c) Do not prohibit intermarriage of the fit.

(d) Do not make it compulsory for the unfit to marry. (English Law. Minnesota. Michigan. North Dakota. Argentina.

- (e) Child marriages. Medical certificates of health before marriage
- (f) Employment of women and children in factories.
- (g) Sexual ignorance.
- (h) Unnecessary diseases.
- (i) Venereal diseases.
- (f) Murder, Abortion, Artificial checks, Suicide.



edings of the Sanitary Institute of Great Britain, Ordinary Meeting, Wednesday, March 8th, 1882.]

ABSTRACT .-- Range of Hereditary Tendencies in Health

By George Gaskoin, M.R.C.S.

ABSTRACT.—Range of Hereditary Tendencies in Health and Disease.

By Gronge Gaskors, M.R.C.S.

The writer of the paper affirms that he has acquired his convictions in the consulting-room, and chiefly through an extended enquiry he has made as to the causes of diseases. Such experience, he believes, to give a sounder basis for conclusions than any that is taken from averages. Observation, and not computation, is to be desired; the study of hereditary influence is very much one of detail. True, indeed, that individual enquiry is apt to prove disappointing, so long as we restrict our motions of heredity to the direct transmission of unvaried types; but this is not the way that diseases are generally transmitted. They ordinarily undergo metamorphosis into a corresponding, or what Burton calls "a symbolising disease," agreeably to a method which they have; and to be well acquainted with these transformations constitutes the highest accomplishment of the physician. He must also know diseases in their finest shades. In common experience of direct heredity, a gase will seldem be met with which goes through three remongs or generations, and those distinguished writers who have been most industricus in collecting cases out of the records of medicine do not agree to more than six or seven generations as extreme; such instances being of course of the utnost rarity. Prosper Lucas, the great apoulte of heredity, goes no further than this, but will only accept it as record; be will by no means allow it for a law, nor accept it as record; be will by no means allow it for a law, nor accept it as record; be will by no means allow it for a law, nor accept it as record; the will by no means allow it for a law, nor accept it as record; the will be not allowed to the same strong but half disclosed law. Such limit would indeed seem to have been exceeded in the case of George the Third, our late revered sovereign, who inherited his affecting the various forms of silesate. In skin diseases and insanity the hereditary influence is ported

by Europe generally. The house of Valois itself is a sad example of hereditary ineptitude: not one healthy organisation on the throne.

Some illustrations are given in the essay of families that have retained their primitive vigour through long centuries of time, and reasons are adduced to show why old families often appear less ancient than they truly are. The general position of inequality of race is maintained as still verifiable, and the disadvantage, not to say fatality, of marrying into a lower stock is insisted on, both in social and political results.

The plea of insanity is, to a certain extent, allowed to crime. The difficulty of stamping out brigandage commented on, and the question is mooted whether in every community where conquest has succeeded conquest, and race is superposed on race, there does not remain in the lowest substratum (perhaps also the most numerous) an hereditary hostility and mistrust to what is above them, having for its basis a racial inferiority or other physiological cause.

The relations of the administration of justice to the medical profession does not escape without comment, especially as regards manity; and it is in connection with this that a severe censure is cast on historians, otherwise so respectable, as Belsham and Lacretelle, who have perverted the public conscience under bias of a political creed, notably in the cases of Lord Ferrers or Count de Hoorne.

It will be seen that the general bearing of the essay is in favour of a long-enduring hereditary influence, to which, indeed, no limit can be assigned.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SYLLABUS

OF THREE LECTURES

ON TERATOLOGY.

TO BE DELIVERED

IN THE THEATRE OF THE COLLEGE,

ON WEDNESDAY THE 20rm, FRIDAY THE 22xb, AND MONDAY THE 25rm OF JUNE, 1877.

AT 4 PM. EACH DAY.

By BENJAMIN THOMPSON LOWNE, F.R.C.S.

LECTURE I.

JUNE 20th.

Introductory.

Causes of Malformations:—I. Inherited tendencies. Transmission of a Malformation from the Parent. Certain forms of Malformation almost confined to certain Animals, or at least much more common in them than in others. II. Abnormal conditions acting directly upon the Ovum; Experiments of M. Dareste. Relative Frequency of Malformations in Birds and Mammals. III. Diseases of the Ovum or Embryo.

Classification of Malformations. I. Variations in the process of Development. II. Abnormal conditions arising from incomplete Vegetative Reproduction. III. Abnormal conditions arising from Atrophy. IV. Abnormal conditions arising from Disease of the

Variations in the Developmental Process. The Laws of Variation. Deviation from the average. The Laws of Quetelet and Galton. Examples. Disturbance of the Law of Deviation from the action of a definite cause. Illustrations of these Laws in the case of the Human Eve.

Great Deviations from the average. Giants and Dwarfs. Variation in the Number of Parts. Multiple Organs chiefly liable to this form of variation. Examples from the Vegetable Kingdom. The Laws of Reversion, Correlation of Growth, and Compensation.

Latent Transmission. Assumption of Male characters by the Female, and of Female characters by the Male. Theoretical Explanation of Atavism. Darwin's Theory of Pangenesis.

LECTURE II.

JUNE 22nd.

Double Monsters.

The Origin of Double Embryos. Fission and Fusion. Observations on Eggs with Two Yelks. Statements of Geoffroy and Schultze. Observations by M. C. Dareste and M. Lereboullet. Embryology of the earlier stages of Development in the Vertebrate Ovum. Definition of the term Fission. Malformations amongst the Coral Polypes and amongst Plants. Anterior and Posterior Dichotomy in Vertebrates. Twin Births. Sex in twin Births. Geoffroy's Law of Affinity. True cases of Fusion. Syreniform Monsters. Lereboullet's Observations on the tendency to return to the Normal condition, by Atrophy or Fusion. Results of this tendency seen in cases of Parsitic Embryos and Doubling or Partial Doubling of a Limb. Amorphous and Acardiac Twins. The Phenomenon of Fætus in Fætu. Impaction of a second Embryo in the Facial Clefts.

LECTURE III.

JUNE 25th.

Arrest of Development.

The Normal Process of Development of the Facial Arches; arrested conditions of the Investing Mass. Cleft Palate and Hare-Lip. Absence of the Lower Jaw. Cyclopia. Condition of the Ossicles of the Ear in Cyclopia. Fusion of the Tympanic Cavities. Condition of the Brain, Nerves, and Vessels. Arrested condition of the Mouth and Pharynx. Janus-like Malformations. Concluding Remarks.

Tolward Trimmer Secretary.

no.



OBERLIN COLLEGE.

Course in Physical Training

FOR WOMEN.

1895.

COURSE IN PHYSICAL TRAINING FOR WOMEN.

FACULTY.

DELPHINE HANNA, M. D., Instructor in Physiology, Director of Woman's Gymnasium.

FRED EUGENE LEONARD, A. M., M. D., Professor of Physiology, Director of Men's Gymnasium.

ALBERT ALLEN WRIGHT, A. M., Professor of Geology and Natural History.

FRANK FANNING JEWETT, A. M., Professor of Chemistry

HENRY CHURCHILL KING, A. M., D. B., Professor of Philosophy.

FRED MONROE TISDEL, A. M., Associate Professor of Rhetoric and Oratory.

EVA MAY OAKES, Instructor in Drawing and Painting.

THEODORE M. FOCKE, S. B., Tutor in Physics.

ALBERTA JOSEPHINE CORY, Teacher in the Woman's Gymnasium.

LYNDS JONES, A. B., Assistant in Geology and Zoölogy.

GENERAL INFORMATION.

It is the aim of this course to prepare competent directors and teachers of physical training for colleges, academies, Young Women's Christian Associations, and public schools. Applicants must be graduates of a good high school, or have had an equivalent amount of instruction. Ordinarily certificates will be accepted, but the right to examine is reserved.

The tuition is \$75.00 for the first year and \$100 for the second, including laboratory fees. All privileges open to regular college students are granted to students in this department. Diplomas will be given to those students who satisfactorily complete the course.

COURSE OF STUDY.

FIRST YEAR.

Fall.

- 1. Gross Anatomy of the Cat.
- 2. Chemistry, with laboratory (Chemistry 1).
- 3. Physics (Elementary Physics).

Winter.

- 1. Human Physiology (Physiology 1).
- 2. Comparative and Systematic Zoölogy (Zoölogy 1).
- 3. Elocution (Oratory 1).
- 4. Drawing (one hour daily, 5 hours a week).

Spring.

- r. Human Anatomy.
- 2. Physiology of Exercise.
- 3. Histology (Zoölogy 4).
- 4. Elocution (Oratory 2).

SECOND YEAR.

Fall.

- 1. Psychology (Philosophy 1).
- 2. Special Kinesiology.
- 3. Anthropometry.
- 4. Assigned Reading.
- 5. Practical Work.
- 6. Teaching.

Winter.

- 1. Physical Examinations and Diagnosis.
- 2. Massage.
- 3. Assigned Reading.
- 4. Practical Work.
- 5. Teaching.

Spring.

- 1. History of Physical Training.
- 2. Hygiene (Hygiene 1).
- 3. Emergencies.
- 4. Medical Gymnastics.
- 5. Pelvic Anatomy and Physiology.
- 6. Teaching.

DESCRIPTION OF THE WORK.

For a description of the work in Physics, Chemistry, Zoölogy, Histology, Physiology, Hygiene, Psychology, and Elocution, students are referred to Courses of Instruction in the College and Academy, under the titles indicated in parentheses.

Gross Anatomy of the Cat. Fall term. Laboratory, Mo., Fr.; recitation, We. 67 hours. Mr. Jones.

This course is designed to prepare for the courses in Physiology and Zoölogy. The laboratory work consists of the gross dissection of the cat, with drawings and descriptive note-book work. One hour a week is devoted to conference and a quiz upon the dissections. Reference book: Wiedersheim's Comparative Anatomy of Vertebrates.

Human Anatomy. Spring term. Five days a week.

Dr. Hanna.

The course includes the study of Bones, Joints, and Muscles. Text-book: Gray's Anatomy.

Physiology of Exercise. Spring term. Two days a week.
Dr. Leonard.

Lectures on General Structure and Properties of Motor Apparatus, Effects of Exercise, Fatigue, Training, Classification of Exercises. For reference: Martin's Human Body (advanced course), Lagrange's Physiology of Bodily Exercise.

Special Kinesiology. Fall term. One day a week.

Dr. Leonard.

Choice of Exercises, Progression, Method of Conducting Lessons, Apparatus, detailed study of each of the ten groups comprising the Swedish Day's Order. Based on Posse's Special Kinesiology of Educational Gymnastics.

Anthropometry. Fall term. Dr. Hanna.

Practical work in Recording, Measuring, Testing, and Charting.

Physical Examinations and Diagnosis. Winter term.

Three days a week. Dr. Hanna.

Lectures, with demonstrations, on methods of examining individuals in order to determine their variation from the normal; instruction in the use of developing appliances; method of prescribing exercises to secure harmonious and symmetrical development.

Massage. Winter term. Three days a week.

Dr. HANNA.

Lectures, and practical work in the method of application.

History of Physical Training. Spring term. One day a week.

Dr. Leonard.

Lectures, with required reading.

Emergencies. Spring term. One day a week.

Dr. HANNA.

Recitations and demonstrations on such subjects as Sprains, Hemorrhage, Burns, Poisons, Unconsciousness, Drowning, Bandaging, etc. Text-book: Doty's Prompt Aid to the Injured.

Medical Gymnastics. Spring term. Three days a week.
Dr. Hanna.

Lectures on the therapeutic use of Gymnastics in the treatment of Lateral Spinal Curvature, Nervous Diseases, Joint Affections, etc.

Pelvic Anatomy and Physiology. Spring term. Three days a week.

Dr. Hanna.

This is a course of lectures and demonstrations.

Assigned Reading. Fall and Winter terms.

Selections from the writings of Spencer, Maclaren, DuBois-Reymond, Schaible, Blaikie, Sargent, Hartwell, J. Stanley Hall, Wey, Harris, Mrs. Bissell, and others.

Practical Work.

Instruction in educational and artistic gymnastics, gymnastic games, the use of developing appliances and the other varieties of apparatus that make up the equipment of a modern gymnasium. A covered skating floor, 120x50 feet, the recent gift of John D. Rockefeller, affords unusual advantages for basket ball, battle ball, and other popular games.

Teaching. Throughout the second year.

One hour a day in the College, and half an hour a day in the Public Schools.

Note.—Practical instruction in the arrangement of floorwork and the management of classes will be given each week throughout the year. Instruction is also given in bicycle riding, lawn tennis, and skating.

For further particulars, address

DELPHINE HANNA, M. D., Baldwin Cottage, Oberlin, O.

FORMER PUPILS.

Among those who have pursued the course and are now occupying positions as teachers of physical training are the following:—

Miss S. R. Avery, Parish House, St. Luke's Church, Kalamazoo, Mich.

Anne Garvin, Wildwood Seminary, Jackson, La. Ethel G. Johnson, public schools, Kenton, O. Martha Nichol, Y. W. C. A., Toledo, O. Gertrude Pelton, St. Mary's School, Knoxville, Ill.

Emily D. Smith, Pilgrim Church Institute, Cleveland, Ohio.

Nellie A. Spore, Mt. Holyoke College, South Hadley, Mass.

ANTHROPOMETRIC TABLE

DEPARTMENT OF PHYSICAL TRAINING, OBERLIN COLLEGE.

Arranged according to the percentages at the left, from the measurements of sixteen hundred women (Oberlin students). The black figures indicate millimeters and kilograms; the red, inches and pounds. "Lung Capacity" is gived in liters and cubic inches.

Measurements Taken and Compiled by Delphine Hanna, M. D., Oberlin College, Oberlin, Ohio.

				HEIGH	CT.															GIR	TEL.												-10	SPTI			BRE	ADTH					1.1	ENGTE	ī.,			STR	LENGT	FIL.	
AGE	WESSET.	Beight.	Series.	Klee.	Total Page	Name.	Berrens.	Head.	Neck.	Chee	Cheek full.	Ninth eth.	Stach rth full.	Wales	a de la	Thips R.	THERE	Knee R.	Knee L.	Our.	CASTL	Ankle R.	Anable L.	Items II.	Instant L.	Uparm R.	Up arm 1.	Elber I.	Elbow L.	Forestra R.	Possess L.	Write B.	1 100	1	Boad.	Seck.	(Besiden.	Walte	Hilps.	Nipples.	Shoulder Elbert R.	Sheatler Elbow L.	Elbow Tip R.	Ellow Thy L.	Poor R.	Fred L. Streetch of	1	Town Town	Cheek	Forestra B.	Pressure L.
10.5	71.	1790	954	678	862 1	000 3	100	584	145	109	103	855	859	799	1068	635	640		404			201		240			510			254	258	145 1	64 10	99 23	0 100	300	401	250	385	242	379	374	403	608	Dia .	158 17		0.6 154			
s inn	67,3	1700	100	456	848. 3	046 T	299	579	329	346	892	792	826	709	1008	629	626	404	200	971	370	228	229	204	203	206	299	263	261	204	200	10 1	66 11	H 19	9 130	101	10.5	244	300	228	372	367	45A	458	250	100 17		4.N 139.			29.2
26.	66.2	3665	580	436	#B3 7	000 T	179	304	102 (1.3	N04	878.	764	806	690	0008	402 24.5	610 DL	200	380	365	364	222	226	200	229	294	200	200	238	200	26-	150 1	DA 31	0 10	9 130	100	300	200	300	220	266	- 563 16.5	451			269 27		A III			
24.	60.8	3865	878 11.3	600	H15 1	104 3	964	369	107	MIS .	100	163	798	670- 20.4	.909 11.3	20m 12.3	500	379 14.5	30% 74.3	900 11.1	358	254	215	226	.224	203	279	231	229	264	209	156 - 1	54 34	11	0 100	10	101	200	10.1	330	309	317	445	444	166	244 26	" /	9.6 115	200	27.0	26
20.	100.0	1049	100	443	904	000 1	105	561	100	104 T	100	791	772 10.1	600	909	580	180	100 14.6	360] () (569	389	291	111	725	1	-	-	3	1	9.1	SE SE		10	79 17	9 5.1	10		229	A	907	956 16.	10.0	140 11.0			242 16 5.1 (ii)		100.0	-	26.5	21.6
THE N	50	14.5	165	1	198	994 3	1	100	V	1	800	V		540	1	500	-	364	361	7	10.1	. 3.2	102	1/5	219	362	20.6	13	रहाँ । १३	9.2	111		50 Y	11 6	101	1,7	34.4	1.3	10.6	300	110	349	407	TEAT	9,4	250/	5 330	an Ac	6 262	13	22.8 31.17
25.4	50.8	1029	500	679	/	1	50	50e 20.	122	200 013	927 927	730 17.8	700	Y	941	20.0	77	100	18.1	1111	10.5	100	200	122	23.6 1.5 23.5	2916	12.4	4.6	10	63	9.0	3,01	49 Y	10	6 16	94	100	201	11.5	196	307	347	-	HIL	11	987 16	1 10	E.H. 96.1	10 10	21.9	1
20.10		100.0	852	436	TIN	W2 1	108	556	209	278	10.0 10.0	20.5	764	629	901	21.0	348	302	300	330	300	1		200	334	903		200				0 1			4 146	V	300	229	11,1	150	266	162	629			200 14	11/21	N 200	1 21.0	(april e	
10.5	19.7	340	110	10		968 I	100	A			828	608	天	(C)	100	544	540	340	THE.	329	1	200	200	104	253	100	200	229	97	209	10	18]	48 10	8 16	1 140			218	A	196	343	330	427	425	214	201 1	20 6	12 12	22.5	4	20.7
19.10	1	from	864	603		960 X	F	550		760	p	W		/111	yo	-	4	348	361	1	328	200	200	+	230	208	200	1	1	228	100	n)	10	Y	0 140	91	364		205	po	500	atla	631	428	211	200	10 06	6.4 79.3	E 2.7	=	19,9
29.3	50.	1100	840	606	-	201/1	58	349	304	4	N04	683	728	er	109	504	301	342	349	100	221 17.4	120	190	100	209	258	248	235	212	223	230	V	65 36	4 15	2 200	96	7	1	332	180	1	=/	ea ·	1	201	202 36	16 54	6 7KI	2 20 0	21.4	=
19.	00.	1584	808	63 H2	256	900 1		345		106 79.4	299	679 III.T	119	600	104	509	509	12,3	-	123	219	+	198	200									61 16		6 26	V	111	212		184	-306	1000 11.1	429	05	and his	200 130		9.6 70.1		21. 7	28.6
18.9	49.1	1005	ACM.	100	700	ic E	84	345	299	749	790	(1) (1)			588	524 (11.6	589 011.0				218 11.5	110	- Noted		201	107	-V	113		A3					3.6		363		E	165		2014	417	426 15.1	229	229 136	1100	AZ 00.1	823	161 3	
28.5	48.1	7	820	-		146 1	is/	1		743	4		1/1	21.0	四	20.4	304	301		1	TA.			1.2	1	264	20.6	220	111/	8.6	1		40 35 40 35	2/	31		158	50		1130	200	116	435			256 310	100	67 643	3, 803	1000	224
18.1.	0.4	1000	22.5	11.0	1	904 E	61	509		1	700 700	500	708	Y	500	10H	3	22.7	11/	12.7	200	1.6	7,6	1	900	354	7.0	hai	1	6.6	10	161.1	H 10	1 8	111	1.1	250 250	309	313	150	10	100	111	411	200	226 15	60.00	0.7 S4.3	11-16-1	A	1
17.11	100,5	1543	03.5	200	20.93	100 10	16	0.5	1,6	298	709	600	606	260	30	10.1	19.7	100	100	300	394	1	and .	201	201	254	229	206	200 1	254	5.3	143	S E	3 N	1 100	V	248	200	201	172	124	102	400	400	724	1110	1	k 81.3	100	-	¥.
17.	41.3	1009	930A	10.6	799	NEE E	146	554	260	719	760	75.8 645	689	678	11.4 838	410	455	228	12.6 12.6	209	250	138	7.1 288	199	199	225	226	201	200	21.	206 1	DO 1	18 15	0 14	1 138	84	264	199	300	100	111.7 920	127 229	404	(6.5° (60)	203	BEL IN	10 35	N 111.1	N 16.6	162 1	14.3
	62.9	1518	805	DIS .	TIL	100 1	95 95	App 1	268	700	728	600	679	5408	109	479	478	550	230	294	294	185	185	196	196	221	219	199	196	200	204 1	18 1	17 14	n 36	0 110	80	120	299	207	365	107	200	250	Dire	229	216 100	9 20,	15 40.	10.2	14.8 1	12.3
15.9	60.0	1499	790	209	err	984 E	50	804 1	290	008	799	629	600	158	288	464	400	206	104	294	294	180	160	194	196	229	255	216	194	204	196 1	H 1	36 34	1 10	6 102	62	302	190	288	150	Elo	300	290	300	255	215 140	H 25.	4 20.1	5 18.3	12.7	ILA
16.		2478			694 06.9	NO 10	04	529 1 25.6	278 0.9	06. 16.9	726 34.8	800 13.5	649 15-1	143	738 30.6	947 17.6	410	296	296 11.7	229 11.	209 11,	128	179	189 T.(189 T.4	230	300	190	140	200	10	33 1	1 19	9 35	1 129	79	225	288	279	133	300	204 12	386	284	285 5.4	202 140 5.3 56	5 25 1 11	2 24	9.3	11.4 1	L
14.1	20.A	1453	765 311.1	360 163		HO 12		343	274 0.31	084 24.2	308 27.4	305 31.6	636	107	756 29.8	428 25,8	428 16.0	294 11,9	200 11.6	269	200	176	374 6.6	186	184	200	399 7.8	160	158	175 1.7	7,5	30 T	29 23	i 12	9 106 5.	28 8,1	315.5	7,6	268 10.3	30	200 11.8	280 13.7	380 13.	279 16,7	907 83	907 140 9.3 ST	1 15	5.9 25. 5. 95.		30.5	

To comparison here lines labore from the short person manarens

GOLLEGE GALTON PAPERS STANDAY/32,0

, taken_ _, 189__, by_

ANTHROPOMETRIC TABLE

DEPARTMENT OF PHYSICAL TRAINING, OBERLIN COLLEGE.

Arranged according to the percentages at the left, from the measurements of five hundred women (Oberlin students) who have taken one hundred half hours of exercise, extending over a period of eight months. The figures indicate millimeters, kilograms and liters.

Measurements Taken and Compiled by Delphine Hanna, M. D., and Alberta Josephine Cory, Oberlin College, Oberlin, Ohio.

T	7			1	18393	IT.															SIRTS						10							DEST	IL.		BREA	DTH.		_			LEN	OTH			_	STR	ENGT	TH.	100
PER CENT.	AGE	WESTERN.	Beight.	Shitne.	Klane	Pubes.	Namel.	Bernish.	Head,	Neck.	Chest	Cheef full.	Shath rib.	Shoth rib	Wales.	Elpe	Thigh R.	Thigh L.	Knee E.	Knes L.	Colf R.	Coart.	Ankle E.	Ankle I.	Instep S.	Date P.	Up arm L	Elbert R.	Elbew L.	Forestra R.	Potence I.	Writes R.	Writes L.	Chert.	Head.	Neck.	Beelden.	Walet.	Hips.	Nipples.	Elsow R.	Elbow L.	The The R	Tip L.	Foot it.	Free L. Stretch of	1 1	1	Cherk	Forestra R.	Foreign L.
1 1		-	-		-	-	1000	here	140	***	-	-	-	414	****	1000		635	211	ATTO		105	-	-			-		150	700				201 22		100	420	965	280		100										H.5 1
	=			400		100			000	-	-	700	100	000	1100	2000		-	-			-				7 30				200						-	410	-		-		-	-		24 3		400		44		
0	-		-	45					204	209	300	909	290	544	710	2004	000	-		200	24.0	100	200	200 3			-	260	300	200	204	100	200	190 20	114	100	900	268	212	-	300	204	C8 6	04	204 3		-	-			29.2 1.
b 2	-	-	-	+	-			=		-	940	190	768	829	639	300H	629	626	199	397	129	219	238 1	236 2		10 80	2 300					-	130	190 19	1 110	90			073	-	-	-	450 4	40 7	246 2	121	9 204				26.4 1.
10 3	-		-	-	1000	120	1000	1398	803	204	800	803	746	796	600	908	0000	000	279	209	260	100 2	33 2	33 2	9 2	9 26	200	-	234	210	-	158	136 1	181 18	100	20	380	224	303	202	806 1	304	645 4	62 1	265 2	45 100	0 20				24.5 E
15 =	1.5	08.8	3607	679	465	800	106	1354	509	119	304	865	230	792	610	979	201.	162	309	108	304	104 1	109 1	100 12	B 3	D 20	200	200	200	260	240	100	114 1	100 17	100	16	190	200	354	267	300 1	149	400 4	4	243 2	43 100	1 14	A 130.	1 31.5	23.8	21.6 2
10 2	1.0	87.9	108	672	445	796	210	1040	365	319	805	800	719	774	400	509	785	529	260	200	349	165 1	205	20 2	16 2	200	Ex	229		-		138		179 17	40		807	-	549	214	549 1	ME .	437 4	35 3	141 2	41 100	- 10	A 129.	4:30	21.9	2L6 =
15 2	22	SLS	2439	903	439	789	979	3309	bits	314	799	845	715	768	646	164	60%	509	309	356 :	245	164 1	194 - 2	204	9 2	0 23	200	228	225	249	265	152	150 1	296 129	148	95.	204	221	D00	200	348 1	145	434 4	3	200 2	165	-	1 135	2 29,4	24.5	23.9 1
10. 2	1.6	55.5	3630	642	454	318	003	1000	366	-831	380	801	767	100	614	166	300	2004	354	200	260	160 .	202 3	205	19 2	19 275	190	.28	229	200	100	150 -	10 1	74 10	16	98	200	223	543	199	345 1	143	602 4	29 1	206 2	164	3 38	8 137.	1 28.5	26.2	23.3 2
15 11	12	34.4	103	501	600	278	909	1303	530	309	779	100	700	104	629	509	330	109	349	349	209	100	000 1	200 2	10 2	17 346	204	220	209	202	201	10	105 1	172 16	145	92	208	229	210	194	340 (180	429 4	F 3	207 2	96 163	34	4 105	A 25.6	23.5	20.5
0 2	111	55.4	3614	853	-ca	770	964	1008	536	309	776	824	696	700	625	929	349	149	346	246	285	100	199 1	199 2	17 2	5 20	300	239	229	204	229	149	149 1	19 36	145	96	366	228	1007	192	140 1	128	43T 4	15 2	86 2	15 160	N N	1131	25.7	22.4	19.9 2
15 3	1.5	50.7	3909	802	631	267	510	3353	690	203	700	619	610	746	629	101	345	544.	141	242	223	100 1	98 3	m 2	5 2	4 20	250	229	217	201	225	149	107 1	00 10	144	100	264	255	234	180	339 3	ini .	63 E	3 3	04 2	14 162	1 19	4 106	5 26.1	22	19.6 2
10 3		88.7	100	50	620	200	900	1008	554	309	700	813	-088	239	611	912	329	100	820	20	129	129 3	97 1	97 1	14 2	2 200	150	111	204	230	223	147	144 1	107 139	144	10	942	214	500	188	337 1	104	625 B	26 - 1	288 2	10	4 28	7 100	1 25.5	23.3	19,2 2
15 11	1,2	DAT	1106	2 246	629	75A	349	1000	551	203	116	901	629	134	- 009	900	386	504	334	30A	224	129	196 1	196 2	11 2	10 25	200	204	233	229	204	145	16- 1	165 15	240	99	300	212	105	196	334 3	1012	630 4	15 1	202 2	100	1 76	# 10Z.	1 25	29.8	16.5 %
10 11	1.5	50	3500	843	418	758	946	1296	149	300	150	500	401	129	665	200	329	229	334	226	201	104	190 3	194. 2	10 2	10 252	200	213	22.1	225	702	104	140 1	00 10	142	88	202	200	825	161	200 1	150	419 -0	16 2	100 2	150	15	4 96	4 24.5	29.9	27.7 2.
15 11	LE	10.1	1300	809	434	749	100	1209	549	209	749	796	1000	730	300	100	100	100	200	230	320	10 1	92 1	10 2	29 2	s 20	2 945	210	250	220	220	144	141 1	15	101	18	256	204	201	190	301 T	125	436 G	14 3	139 2	29 150	0	4 96	6 23.9	18.5	17.1 2.
10 11		45.3	1303	1 805	800	745	963	1260	548	288	740	765	664	728	280	200	509	516	329	329	118	107 1	190 1	99 2	M 3	T 241	911	200	909	233	229	161	101 1	200 150	149	82	254	206	229	179	129 1	136	414 4	1 2	D 2	29, 150	4	5 80.	1 219	19.2	14,2 2
16 1	N.F	63	1346	100	400	258	907	E274	546	205	108	788	600	738	189	875	509	510	105	224	214	113 1	89 1	99 2	00 2	0 20	200	206	367	220	274	141	140 1	07 IN	100	86	500	204	224	178	126 3	126	430 0	4 3	p 2	n 110	64	1 85.	2 20	16.5	33,4 2
10 11	u	61	1338	608	400	235	915	1208	540	210	729	780	164	204	360	865	360	650	120	220	309	100 1	87 3	88 B	14 2	0 240	200	200	204	239	314	160	120 1	36 36	129	85	201	200	231	174	124 1	122	400 0	16 2	119 2	150	1 20	A 77.	3 75.5	17.4	14.8 2
18 27	.25	0	3348	820	200	725	913	1250	320	249	733	774	68	098	.509	857	405	400	224	818	107	105 3	14 3	80. S	2 2	0 230	204	204	201	204	200	139	120 1	58 14	238	14	344	3100	201	172	80. 1	119.	905 40	0 2	21 2	2 154	- 58.	1 75.	19.6	24.4	163 2
0 17		63.7	1340	616	2005	728	905	1248	356	288	718	765	639	699	500	845	485	485	213	253	sic :	100 3	R2 1	85 E	10 00	e 20	257	199	296	205	208	194	196 1	0 10	1117	165	200	396	100	160	127 1	mb e	602 11	9 2	190 21	150	-	6 65	18.5	35.2	11.1 2
5 34	14	41.5	1018	Bog	280	760	860	1292	300	263	600	745	629	679	300	106	474	473	30A	204	204	200 3	29 1	79 2	M 1	n 234	220	196	294	209	264	155	155 1	45 130	116	10	300	200	294	164	211 3	100 2	200 20	0 2	N7 21	(7 SM)		2 64	9 36.5	34	11.1 1.
.5 1	5.11	59.7	1300	790	806	esc	827	1256	525	37%	480	739	619	600	549	799	407	606	204	291	285	197 3	78 1	78 2	0 1	0 20	203	110	391	294	190	133	100 1	61 19	334	75	325	167	298	130	100 I	100 1	200 20	0 2	20 27	14 148	n	7 16,	5 16.6	11.0	10.1 1
1 10	-	-	-	-	-		-	-		=		720	600	625	350	778	640	465	201	290	277	ES 1	73 1	75 3	1 2	e 200	200	289	180	200	196	150	130 1	200 330	130	72	117	188	200	154	100 2	200 1	283 2	2 2	110 2	P 100	750	9 42	1 12.8	30.8	9.4 1
	11												1000					-	-				200				-	-	-	-		-	-	-	-					-				-6		-	-	-	-		